Lumleian Lectures
ON
INFLAMMATION.

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LECTURE I.
INJURY AND DAMAGE.

MR. PRESIDENT, FELLOWS, AND GENTLEMEN,—I feel that some apology is needed for coming before the College with a subject which has been so frequently discussed already, and about which it may be presumed that I have nothing new to say. I cannot promise that it will not be so: for I have no new doctrine of inflammation to advance, no discovery to relate. In what I shall have to say to-day of the nature of the process of inflammation, it will be my purpose to strengthen the position I have taken with reference to the subject on former occasions, and particularly in my Essay on Inflammation, published in 1870, and in the lectures I gave in the theatre of the University seven years ago. In my second lecture I intend to enter on a question which, though not new, has attained of late years a significance which it did not before possess—that of the etiology of inflammation; that is, the discussion of the various agencies which, either as principal or accessory causes, may be considered as its origin. Lastly, I desire in my third lecture to bring our modern knowledge into comparison and harmony with the teaching of those who have thought and observed best on the subject, from Hunter to our own time.

The definition which, in our epoch, has carried more weight and has had more influence than any other, is that given at about the same period, and in nearly the same terms, by Mr. Goodsir (1845), Dr. Redfern, and Mr. Bowman, the last of whom described the effect of an injury of the cornea as a change wrought in the natural acts of nutrition then existing in the wounded part. The same conception originated in the mind of each of these observers independently from the study, which the introduction of the microscope and their own anatomical discoveries had rendered for the first time possible, of the textural changes which inflammation leaves behind it. This conception, so thoroughly British in its origin, was soon transplanted into Germany. It was adopted by Virchow, with little modification, and became part of the more general doctrine of "cellular pathology," which has not, even yet, lost its influence. The work that Mr. Bowman did about inflammation was as complete as all the other work that he did in those early and fruitful years. The appearances which he described in the cornea, as evidence that the "natural action of its nutrition" had undergone a change, are as full of interest to us at the present time as they were to him; and if we were to repeat his experiments we should find the results to be exactly as he said they were. Why, then, should we not content ourselves with the same explanation? Why should we not continue to say with him and with Goodsir—inflammation may be described as a modification of existing normal processes? The answer is that during the last ten or fifteen years another step forwards has taken place, comparable in importance to that which followed the anatomical discoveries of Henle and Bowman and Goodsir—a step forwards in the same direction as the former one, and like it dependent on the acquirement of new methods of observation. These methods may be described as physiological, just as those which led to the brilliant discoveries of Virchow and of his school were anatomical. We are now striving to become eye-witnesses of the actual processes of disease, at the same time that we continue with unabated curiosity, and vastly improved means, to scrutinise its results. We have thereby learnt that many pathological processes, and particularly the fundamental one which now occupies us, is not quite what, from its results, it seemed to be. We find when we actually watch the effects of injury on a living part that "the old order changes," but does not "give place to new," that we have before us, not disorder of function but arrest—not the diversion of sources of nutrition into new channels of activity, but merely the accumulation of such resources when they are useless if not destructive; and consequently that the restoration of a part to the natural state must be as simple as its departure from it, that the resolution of an inflammation means either that the temporarily arrested process simply goes on again, or, if the process has proceeded to its ultimate issue, death of the affected part, that the destroyed part has to be repaired, not (as we used to think) by a continuation of the morbid processes, but simply by the restitution of the normal condition. The principle is the same (if I may be permitted to use so homely an illustration) whether the inflammatory process invades our houses or our bodies. Obviously no one would think of regarding the destruction of a house by fire as a modification of any normal process, nor would it occur to anyone that the damage done would be best repaired by extension of that process, perhaps in a milder form. I am well aware that this illustration is open to the objection that an inflammation has only the most remote resemblance to a fire, but I use it merely for the purpose of enforcing what I want to say—namely, that if we confine the word inflammation within the limits of the original definition, and accept as its phenomena those which have been assigned to it by the authority of tradition (which is the only authority which has any claim to be heard in such a question), its essential nature is fully expressed in the word "damage," and that it has no further relation to the process of repair than that which arises from the universal operation of the physiological law that whenever part of an organ is destroyed, new growth proceeds from the old to supply the defect.

Keratitis, as I have already hinted, and will endeavour to show more completely in my third lecture, was the point of departure of the cellular pathology. It is therefore expedient to begin with it in support of the appeal which I am now about to make from the doctrine of so great a man as Virchow to the direct teaching of experiment. Although in the cornea we have to do with a structure which is devoid of vessels, and therefore, in the sense of the classical definition, incapable of inflammation by itself, yet inasmuch as in every keratitis the adjoining vascular structures sympathise—that is, are also affected by the injury—it is allowable to include what happens in the vascular border as forming part of the process. When an incised or punctured wound is made in the cornea of the rabbit of sufficient depth to penetrate below the superficial epithelium and to expose the proper corneal tissue, the reaction is exceedingly slight. All that can be seen by the naked eye is that the wound is surrounded by a haze of opacity which rapidly disappears, but there is no congestion of the limbus. As an exciting cause of inflammation, therefore, such a wound is inadequate; for none of the objective signs of inflammation are present. To induce them, with as limited an injury as possible, the best way is to insert a silk thread as a seton at the centre of the cornea, withdrawing it as soon as it has accomplished its purpose. After several hours, during which no visible effect follows the injury, the cornea is seen to be surrounded by a red border which consists of the wreath of dilated capillary loops of the episcleral vessels, from which, for the most part, it derives its nutrition. It often happens that the inflammation which has thus begun proceeds further, that the marginal congestion extends and increases until the cornea is surrounded by a ring of tumid and highly vascular mucous membrane, that the surface of the conjunctiva is bathed with pus, that the cornea becomes more and more opaque, and that eventually pus collects in the anterior chamber. This effect exceeds what is wanted for the purpose of observation as much as the other falls short of it. The excess of reaction may be avoided by withdrawing the ligature as soon as the conjunctivitis has begun, in which case it may fortunately happen that the zone of redness is limited to one border only, opposite to which a radial tract of opacity extends towards the middle of the cornea, and becomes continuous with the zone of opacity which surrounds the path of the seton. To understand what this means it is scarcely necessary to appeal to the microscope. It is plain enough that the central area of opacity is of the same kind as the little cloud which, when the cornea was injured by merely breaking up its surface with the point of the scalpel, as Mr. Bowman did, surrounded the little wound. The other area as evidently comes from the edge, and is a consequence of the surrounding inflammation. Mr. Bowman

would have taught us to understand both as results of a "change of the natural acts of nutrition," having their seat in the wounded part; and particularly he would have regarded the central cloud—that which immediately surrounds the wound—as immediately dependent on nutritive disorder of the corneal tissue irritated by the seton, and the marginal opacity as evidence that similar changes were beginning in the neighbouring vascular parts. Experiment shows that the true explanation is much more simple than this. The reason why the little punctured wound surrounds itself with a cloudy border is that cells resembling the colourless corpuscles of the blood exist in the conjunctival sac and find their way by the breach into the little branching tubes which permeate the tissue in every direction; the proof of this being, first, that if we place dead cornea, in which a puncture has been made, under the same conditions for a few hours, we find that it remains transparent everywhere excepting in the neighbourhood of the injury; and, secondly, that we may destroy the tissues of the living cornea, by other means, to an extent far exceeding that of either the seton or the puncture, without any such results. We may, indeed, destroy half the organ without producing any opacity whatever, provided that the agent is of such a nature as not to disintegrate its protective epithelial covering and thus open the way for the immigration of cells from the outside. The agent which answers this purpose is chloride of zinc, which as a caustic has two invaluable qualities. One is that its action produces very little change in the mechanical properties of the tissue acted on, the other is that it kills up to the limit without damaging beyond the limit. When it is applied to the cornea over a carefully limited surface it leaves behind a scarcely visible opalescence, but the tissue is absolutely dead, the necrosis extending in depth so as to affect two-thirds or more of the corneal tissue. Here, again, the effect, so far as concerns the recognised signs of inflammatory reaction, is usually *nil*. There is no opacity, no surrounding zone of congestion. If you examine the cornea microscopically, what you find is, first, that within the region of necrosis the branched corpuscles which are characteristic of the cornea have become so attenuated as to be indistinguishable; secondly, that immediately outside the dead part these bodies are shrivelled into shapeless masses like little fresh-water polyps which have drawn in their tentacles; and, finally, that beyond this clump region the fixed corpuscles present in every way their natural aspect. If the chloride is applied near to the limbus, the case is quite otherwise. Notwithstanding its little tendency to spread, the episcleral bloodvessels are acted on and filled with blood. The result of that is that thousands of colourless blood corpuscles invade the cornea at the congested border and find their way to the necrotic area, where, from the absence of the normal fixed corpuscles of the cornea, they are more obvious. In this case, at all events, there can be no question of perverted nutrition; for the tissue, which is the seat of the change, is as lifeless as a bit of finger-nail. The whole process, indeed, is so self-evident that neither comment nor explanation is necessary. You have before you a dead tissue, of which all the "natural acts of nutrition," of which Mr. Bowman spoke, have ceased. But that dead tissue is as full as it can hold of living cells. If anything is clear, it is surely this, that they were not born there, but were imported from elsewhere; and if not from the blood-stream, whence?

Let us before we proceed further sum up what we have learnt from the cornea. It is the type or representative of those structures which, under the term connective tissue, we recognise as constituting the connecting and supporting parts of our bodies. It consists of a system of branched cells, each of which is united with its neighbours by its branched processes, these being ensheathed in a matrix of a texture identical with that of the non-cellular parts of ordinary connective tissue, but possessing those physical properties which fit the organ for its purpose. This matrix is hollowed out into intercommunicating channels which in form and branching are the counterparts of the complicated network of protoplasm they are intended to contain. In every respect, therefore, excepting one, the cornea is a complete tissue of its kind; and, if such tissues in general are to be supposed capable of responding to injury in an active way—that is, by continuing their "natural acts of nutrition in an unnatural, abnormal, or perverted way"—there is no reason whatever why the cornea should not do the same. Trained as we all have been in the "cellular pathology," we expect this, as it were, instinctively; but what we actually see is quite different. At the border of the faint eschar made by chloride of zinc we see on one side health, on the other not disease, but death. No reaction, no perverted nutrition, nothing but damage which might be compared to that which a corrosive liquid would do to a watch or any other fine mechanism dipped into it. So far, therefore, as can be learnt from a non-vascular structure, the damage done by injury, whether mechanical or chemical, is exclusively negative. It consists in arrest or annihilation of function, not in perversion.

Let us now see what happens in the more common case in which the injured part is vascular. But before doing so let us consider the question to be answered. In injuring the cornea we act directly on cells, fibres, ground-substance, nerves; we have seen what the result is. In acting similarly on a vascular structure we have the same cells, fibres, ground-substance, nerves, but in addition bloodvessels. Any signs of damage, therefore, which exist in the latter case that were absent in the former we have a right to attribute to bloodvessels. To prove this it is desirable first to select for the purpose agents which in accomplishing their work leave nothing behind them, excepting the damage they have done; and, secondly, to compare what happens in two cases—one in which the injury is of such a nature as to affect all tissues equally, the other in which its action is specially directed on the vessels. For the purpose of acting equally on all the tissues there is but one method that can be thought of—namely, the application of cold or heat. It is not necessary to have recourse to a very high temperature. Plunging an organ in water not much warmer than you can easily bear with your hand is sufficient to accomplish all that is required, provided that before the immersion the circulation is arrested by an Esmarch's bandage. The organ used by Cohnheim for the purpose was the ear of a rabbit. The result is in the highest degree worthy of our attention. The immediate effect is, of course, *nil*. But if after the ear has regained the normal temperature, the ligature is removed and the circulation restored, it is seen that in a very short time the signs of inflammation—not merely of active congestion, but of true inflammation—present themselves; and in an hour or two the organ is warmer than its fellow by several degrees, full of blood, and swollen to several times its previous thickness. At first the redness is seen to be due to the dilatation of bloodvessels previously distinguishable, and to the appearance of new ones where none were visible before; afterwards, as the œdema increases, the organ acquires a uniform diffused redness. If at this stage the skin is punctured, coagulable liquid charged with leucocytes (pus-corpuscles) escapes. If the animal is killed, and the swollen ear, after having been suitably hardened, is used for the preparation of microscopical sections, it is found that the subcutaneous tissue exhibits in every respect the characters of inflammatory infiltration.

In the experiment I have just described, the part is subjected to two injurious actions simultaneously. It is deprived of blood, and its temperature is raised to some ten degrees above the normal. It is to the latter of these that the damage is alone attributable; for it is well known that the exclusion of blood from a part for some six or seven minutes has no permanent effect. If, however, the state of anæmia is kept up for twenty-four or forty-eight hours, the case is very different. It might be expected, indeed, that so long a starvation of the tissue would definitely destroy its vitality. If the bandage is kept on long this anticipation is realised; but with care the time may be so regulated that the damage thus slowly inflicted on the starved part is similar in degree to that which was occasioned in a few minutes by the influence of heat, or it may exceed or fall short of it. In any case the objective signs of damage are of the same kind. When the ligature is removed, blood finds its way along its accustomed channels, and for a time there is nothing to indicate that the apparent restitution of natural condition will not be permanent. But if the ear is examined half an hour afterwards, it is seen that arteries and veins are dilated, and the temperature of the ear is already higher than it should be. I need not repeat the description of the process, which although of less rapid development is identical in its results with that we have already had before us. Here, again, the lesson to be learnt is so obvious that it scarcely needs indicating. The two experiments prove that an organ which is thoroughly damaged, or, to put it in other language, of which the vitality of every tissue is depressed but not annulled, is already virtually in a state of inflammation, although from the absence of the circulation (on the condi-

tion of which almost all the visible characteristics of vital changes are dependent) the objective signs of it may be wanting, and that in such an organ the state of inflammation springs at once into existence without any antecedent stage of incubation or development, and particularly that the formation of pus—i.e., the infiltration of the tissue with exudation, which is commonly regarded as rather a consequence of inflammation than as a part of it,—begins from the moment that the damaged vessels are distended with blood, and the internal surfaces of the walls pressed upon by their contents. To those who still find it difficult to realise that pus-corpuscles are not formed by some bioplastic process in the tissues, the experiment may be recommended, as affording one instance at least of pus formation to which such an explanation is inapplicable, the rate of production of young cells being far too rapid to be thus accounted for.

In what has been said up to the present moment I have endeavoured to present a general view of the effects of injury as they may be judged of, without making any efforts to watch their progress minutely. But we must not forget that these are made up of finer details, to see which it is necessary to come nearer, and to penetrate below the surface. Our forefathers judged that inflamed parts were hot by feeling them; we know how hot they are by the thermometer. So as regards the other two Celsian characteristics, we know how a part swells and gets red by watching the process under the microscope. Without its aid our knowledge of inflammation would be as vague as was Harvey's of the capillary circulation. Microscopical investigation has, no doubt, always the disadvantage that the nearer we approach to our object the narrower becomes our field of vision, and some people imagine that this is apt to associate itself with a corresponding narrowness of intellectual scope. If such a danger exists, the way to avoid it is not to change our method with our instrument. It is possible to look at small things in a large way, and *vice versâ*. Whether we look at large things or small things, whether we occupy ourselves with general characters or details, it is alike necessary to bear in mind that our business is with the pathological process itself, not with its results.

The history of pathology from the time of John Hunter to the present seems to show that almost all the great mistakes that have been made may be attributed to neglect of this principle. The method which consists in inferring from the pathological anatomy of a disease its essential nature cannot be dispensed with; for in many cases it is the only method within our reach, but it is an imperfect and uncertain one. For if we interpret our facts wrongly we have no means of finding out our mistake. The only certain way of determining the nature of a diseased process is that which is employed in physiology. It consists in getting as close as we can to the seat of action, in taking care that our view is not obscured by surrounding objects, and in watching what happens with the utmost attention of which we are capable. And this, I take it, is what is meant by the word "research" in pathology, whether it be clinical or experimental, conducted at the bedside or in the work-room. I need not say that, as regards inflammation, this method was the one employed by John Hunter, and more recently by the elder Thomson, Williams, Wharton Jones, Lister, and, indeed, more or less, along with the other methods, by all who have worked to good purpose. That in later times, and particularly during the last ten or fifteen years, it has been the only method is due partly to the better appliances which we now possess for this close scrutiny of the vital processes, and partly to the more sceptical spirit of the time which refuses to accord to inferences, however well founded, the same value as to direct observations.

As affording an excellent illustration of the method to which I have been referring, as showing how clear a view can be obtained at once of all the constituents of a pathological state or process, I would ask your attention to what may be learnt by the microscopical observation of a serous membrane of a mammal under conditions which, although they apparently approach closely to the normal, yet depart from it sufficiently to determine inflammation. For this purpose it is necessary that, during the whole period of observation, the membrane to be observed (the mesentery or omentum of a carnivore or rodent) should be immersed in a liquid which represents as nearly as possible its own normal secretion, and that the temperature of the medium should be that of the body. I shall not describe the details of the experiment, but content myself with stating that the arrangements are similar to those employed by Professor Stricker and myself in 1870, but that the *modus operandi* has been since brought to much greater perfection by my friend, Professor Thoma, of Heidelberg. As a result, he has been able to see the mammalian circulation in a state of unimpaired activity. The most striking difference is that the velocity of the blood-stream in all the bloodvessels is such that even in the veins the axial blood-stream appears as a continuous thin red line, with a plasmatic border perfectly free from corpuscles. But in a very short time the inevitable changes which are the signs of damage present themselves. If the attention is fixed on a vein, the blood-stream in it seems to flag almost suddenly. At once the colourless corpuscles "fall out" like tired soldiers on the march, leave the mid-stream, and loiter against the vein-wall, afterwards sticking to it, just as Dr. Williams described the process for the first time in his Gulstonian Lectures in this College in 1841. We know now that the proximate cause of this loitering of the leucocytes against the internal surface of the vascular wall is the slowing of the current—first, because by the well-known experiments of Schklarewsky it is shown that from the relation which exists between the specific gravity of these bodies and that of the blood, this result is certain to happen; and, secondly, because by altering the rate of flow we can produce or abolish the phenomenon at will. If this were a mere barren problem in vital physics, or even if I could tell you no more about it now than when, nearly forty years ago, Dr. Williams first described it so accurately here, I might hesitate in doing more than to make a passing reference to it. But we now know that it is most intimately connected with the central phenomenon of inflammation, the exudation from the slowly flowing blood-stream of corpuscular liquid. To show this, let me return to the narrative of what happens in the mammalian mesentery. There are three phenomena which demand our attention.

The first is the emigration of the colourless corpuscles. From the moment that these bodies cling to the walls of the veins in the peculiar way that has been so long familiar, they begin to escape. How it happened to as good observers as any who now occupy themselves with the subject, aided by as good microscopes, that this wonderful process remained hidden until both it and its meaning were brought to light by Cohnheim, we need not stop to inquire. To the student of the present day, to whom emigration presents itself as a commonplace and elementary fact in pathology, which is shown to him in the course of his first practical lesson on the subject, it seems incredible that it should have been overlooked; while older men, whose microscopes have perhaps remained under their glass shades for a generation, find it equally incredible that what they or their leaders failed to see thirty or forty years ago can possibly be true now. We are all of us, old and young, too apt to forget how slow and gradual is the process by which we come to a right understanding of objective facts. Let us be prepared to give equal credit to the past and the present, accepting what is new without losing sight of, much less rejecting, what is old.

The second of the three phenomena to which I referred just now is that of the accumulation of coagulable liquid on the surface of the inflamed membrane, and the separation of its fibrin—in other words, the inflammatory exudation. In other kinds of inflammation the exuded liquid is discharged from the veins and capillaries into the intervascular parenchyma, where it accumulates or not, according as the mechanism of absorption is adequate or inadequate for its removal, the most important of these objective signs of inflammation being the expression of defective drainage, or what amounts to the same thing, excessive leakage from the bloodvessels. But in inflammation of a serous membrane no such drainage is wanted. The liquid exuded accumulates not in the tissue, but in the serous cavity, and finds its way back again to the circulation by the lymphatics (situated chiefly in the diaphragm) with which the peritoneal cavity is in communication. For this reason the study of peritonitis under the microscope affords an opportunity not otherwise to be met with of studying the nature of exudation and of its relation to what precedes it. If the part of the membrane which is under observation is surrounded by a ring of glass, which rests upon its upper surface, the exuded liquid, instead of being washed away by the constant stream of warm liquid with which it is irrigated, collects on the surface and soon forms a gelatinous clot, which adheres feebly to the surface of the membrane. You have, in fact, before you, in its simplest possible form, a croupous process. If you remove this soft coagulum from the membrane, and

place it under the microscope, it exhibits the characters of blood plasma which has undergone the same change; nor can there be a moment's doubt that the reason why it coagulates is the same in the two cases—namely, that a certain number of the leucocytes which have escaped, undergo disintegration, in doing so are dissolved in the liquid in which they are suspended, and thereby communicate to it the property which it did not before contain—that of producing fibrin.

The third of the three microscopical phenomena which presents itself in the mesentery is that of capillary stagnation or stasis—a phenomenon which the earlier microscopical observers (as, for example, Dr. John Thomson) rightly regarded as of great importance. They were right in so regarding it for two reasons: first, because it always occurs in inflammations which are of sufficient intensity; and, secondly, because it is in it that the process culminates, by destroying the life of the tissue in which it has its seat. To avoid confusion, it is necessary to regard the process as consisting of two stages—the first transitory, the second definitive. Transitory stasis is only a local exaggeration of that general slowing of the progressive motion of the blood which we have already studied. Permanent stasis is, as everyone who has watched the circulation in the transparent parts of the frog knows, associated with two other changes in the capillaries. One of these is what has unfortunately been called diapedesis—namely, the often sudden extravasation of a number of coloured blood discs from a capillary; the other is that strange adhesion of the coloured discs to each other inside the capillaries, so that they look like rods of red coral, which was so carefully studied by Mr. Lister twenty-five years ago. Of the truth of the principal conclusions to which these researches led him—namely, that stasis is not due to alteration of the circulating blood, but to a change in the channels through which it has to pass—there can be no doubt; for, in addition to his own most ingenious experiments, it has been since shown that when, in the living animal, corpuscular liquids such as milk are substituted for blood, stasis occurs in the injured parts in a similar manner and under similar conditions. I shall have again, in my third lecture, to refer to these facts in their historical relations; for there can be no doubt that, as I have had occasion to state before, they led their discoverer to anticipate the advances which have been made since. What I would now desire to emphasise about stasis is not so much the antecedent changes which give rise to it, as its effects on the tissues which surround the obstructed vessels. Stasis is the mechanism by which inflammation kills, and thereby gives occasion to further pathological changes, of which necrosis is the starting-point. Time does not admit of our studying other examples of inflammation microscopically. I trust that this one instance in which I have endeavoured to give as clear an account of what happens as I could, will suffice to show that just as to the naked eye the visible effects of injuring a vascular part are heat, redness, and swelling, so these have their microscopical counterparts in vascular dilatation and exudation of coagulable liquid, and in the escape of the fibrin-forming elements of the blood; and that all the destructive results of inflammation have their point of departure in stasis. What I have now to do is to show how all these separate results of injury are—not so much by virtue of their dependence on each other, as by their common relation to one and the same proximate cause—like the naked-eye phenomena, not disorders of nutrition, but simply signs of damage.

And first as regards the slowing of the circulation. As no reason exists why there should be any general retardation of the blood-stream, the condition which determines the local retardation must also be local, and if so, must depend on changes of diameter of the blood-vessels, or on increased resistance from other causes in the capillaries. As regards the former, we know by direct observation, first, that there is in inflammation no narrowing either of arteries or veins; and, secondly, that in all inflammations the quantity of blood which flows through an inflamed part is, in the initial stage of the process, vastly increased. It has been proved by exact experiments that the blood-stream through an inflamed limb exceeds the normal flow in the proportion of something like four to one. Further, we know, by measurement, that capillary veins and capillary arteries of inflamed parts are much wider than natural, and that many channels come into view which were before invisible. From all these facts it is evident that, so far as concerns the first stage in the process, the stage during which exudation is going on with greatest activity, the diminution of the velocity of the blood-stream can be due to no other cause than the widening of the blood-way.

If we now proceed to ask why do the bloodvessels widen we get an answer from physiological experiment, which seems to carry us back to John Hunter. They dilate simply because they have lost a power which they possessed before (I am afraid we must be content to call it a vital power) of resisting dilatation. The loss of a vital power is evidence of damage. A damaged bloodvessel is relaxed for the same reason that a damaged heart or a damaged intestine is relaxed.

Next we come to exudation and escape of leucocytes. We have already seen how the slowing of the stream, particularly in the veins, is a condition *sine qua non* for emigration. As regards leakage, we have also seen that on the large scale leakage is an immediate result of injury, that in injured parts the bloodvessels begin to leak at once, that is, immediately after the injury, so that the element in the act of exudation, which remains unaccounted for, is the penetration of the vascular wall by the semi-fluid protoplasm of the leucocyte. Now there are two senses in which a vital phenomenon may be said to be explained or accounted for. The best and most satisfactory is when we can deduce it from the operation of those properties of matter which are operative outside of the organism. From attempting this we are precluded by want of knowledge, or more accurately, by want of the means of investigation. We have, therefore, to fall back on the less perfect method, which consists in placing the fact along with others which it resembles. In the present instance we refer the penetration of the vascular wall of injured parts to the more general facts, of which the examples are very numerous, that leucocytes themselves, and other amœboid bodies which resemble them, possess the power of intruding their own substance into that of dead tissue, and, indeed, of any material capable of imbibition, with which they are brought into contact in an active state. The mechanism by which the necessary contact is established has been explained. As to the mode of penetration, we have to content ourselves with identifying it with other well-known but equally unexplained processes.

And, finally, as regards stasis. To understand its relation to the other effects of injury, and to the injury itself, we must bear in mind that it does not form part of the inflammatory state, but is rather a sequel or a consequence; and, secondly, that the lagging, the stagnation of the blood-stream, and the final choking of the capillaries with blood discs, occur only here and there in the inflamed area; and that when we are able to localise the action of the noxa we find that stasis, if it occurs, is limited to the parts most directly acted upon—that is, most injured. This localisation suggests what, on other experimental grounds, we know to be the case—viz., first, that stasis is the expression of a higher degree of injury than that which is required to produce the inflammatory state (redness, heat, and swelling); and, secondly, that the localised retardation of the circulation which leads to it is the result of a change in the capillaries which renders it more difficult for the blood to pass through them than in the normal state. On the subject of this increased resistance and the conditions which lead to it a most important series of experiments have been recently made by Professors Glax and Klemensiewicz, of Graz, who have profited by the fact that in animals the vital properties of the tissues can be maintained by the artificial circulation of properly arterialised blood, for the purpose of ascertaining to what extent the capillary resistance is modified by the introduction into the circulating liquid of extremely small percentages of injurious substances, particularly of metallic salts.

It was thus proved not merely that the effect of such injury is to produce leakage, but that it shows itself immediately in diminishing the quantity of blood flowing through the bloodvessels of the injured part in a given time, under absolutely constant pressure. These beautiful experiments, though they fail to tell us why a spoilt capillary resists the passage of blood more than a sound one, afford us most exact information as to the condition which leads to this increased resistance. They justify us in saying, that although in the order of time stasis is a consequence of exudation, the two phenomena owe their relation to each other to their being both alike in the direct effects of injury—the former being the sign of a less, the latter of a greater, degree of damage.

I now desire to submit to you one or two consequences which follow from the view we have taken of the nature of the inflammatory state. The first is, that the only direct effect of inflammation is necrosis, that being dependent on the arrest of the circulation, and that the processes of restitution of structures which have thus ceased to live cannot, with any regard to accuracy, be regarded as parts of inflammation, or as in any way different from those by which the same structures are restored when destroyed by other agencies, the determining cause being in the one case, as in the other, the power of renewal inherent in the adjacent undestroyed tissue.

The second point is that the process of inflammation is essentially a terminable process—that is, one which has no tendency to spread or last beyond the limits of its proximate cause. To this deduction I attach great importance, because it is the foundation of what I shall have to say in my next lecture as to the etiology of inflammation. For if it is accepted as true, it necessarily follows that if we meet with an inflammation which does not cease on the removal of its assigned cause, this means that there is another latent noxa at work, of which we had before taken no cognizance. An uncomplicated inflammation is neither reproductive nor infective, neither benignant nor malignant. It has no tendency except the tendency to leave off as soon as the occasion for it ceases.

[At the end of his discourse the lecturer expressed his regret that the first half of the lecture had been published prematurely in one of the weekly journals.]

Gulstonian Lectures
ON
PULMONARY CAVITIES; THEIR ORIGIN, GROWTH, AND REPAIR.

Delivered before the Royal College of Physicians, in March, 1882,

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LECTURE II.—PART II.

THE occasional occurrence of decomposition in the secretions of cavities leads us to inquire into the influences which may be exerted by this cause upon the walls of vomicæ, and particularly into the existence of any absorptive power special to the latter. I have already pointed out that fluids may regurgitate from the cavity into the open mouths of the bronchioles, and, gaining access into the alveoli, may diffuse into the blood. This circumstance introduces into the problem a serious complication, which will be discussed hereafter. For the present, I am specially considering the cavity wall independently of the bronchi opening into it.

The extent to which simple percolation may take place is determined by the condition of the internal surface of the cavities. During the period of formation of the latter the fluids act locally upon the decaying structures. Dr. Reginald E. Thompson, in his book on Pulmonary Hæmorrhage, alludes to this mode of excavation by maceration leading to the appearance of a "nibbling." If we exclude the more virulent cases of acute phthisis, where the lung-substance literally dissolves away in its own juices, and the œdematous forms of softening, the soakage to which I have alluded does not extend into the depths of the tissues, where the work of repair is progressing, but the dead tissue acts as a temporary shield for the living. On the other hand, in the matured cavities, any extensive diffusion of the fluid contents is opposed by the fibrous layer and by the outer zone of fibroid cell-growth, the special function of which is to add thickness to the cavity wall. The possibility of any direct absorption in the cavities mainly depends upon the tightness or the looseness of the fibrous tissue around them. All fibrous structures are by nature fitted for some degree of absorption, and even the densest are capable of opening up hidden paths under the agency of pressure. Much pressure does not usually exist in vomicæ; neither do they contain many of those cells which have a tendency to force their way through lymph passages. The current of secretion is altogether from the tissue towards the cavity, and circumstances rarely arise in ordinary phthisis which would occasion a reversal of the stream. The case, however, is different in the bronchiectatic sacculations; these are from time to time filled—nay, distended—with their own secretion, and the pressure within them is periodically increased by ineffectual efforts at expectoration. Although the existence of a limiting membrane has been microscopically demonstrated by Grancher and by Dr. D. J. Hamilton, it remains an open question whether, in its stretched and thinned condition, this membrane opposes an effectual barrier to the more soluble products of decomposition. The clinical evidence appears to justify this doubt. Symptoms of putrid infection, such as nausea and diarrhœa, frequently coincide with a period of fulness of the tubes, and disappear with the evacuation of their contents. No such continuous layer exists in the common phthisical cavities. If placed under similar pressure the meshes of their fibrous coat would probably allow of free filtration. Some filtration actually occurs from simple stagnation in the putrid cavities to which I have referred, and it is significant that in these cases the peculiar fetor is present after death in the other organs, showing that the whole blood is contaminated. From this dangerous degree of filtration of secretion the vomicæ in phthisis are usually protected by the absence of pressure within them, and perhaps in a slight degree by the false membrane due to necrosis, which their inner surface exhibits.

In connexion with the subject of absorption, it is interesting to compare with the cavities, relatively well drained by means of patent bronchi, the deposits which remain permanently isolated from contact with the air, and gradually undergo shrinking within the lung tissue. Microscopical sections usually show around a caseous nodule a clear space or vallum separating the mass from a zone of fibro-nuclear growth. This space is traversed by wandering cells, which may be noticed on their return laden with pigment and granular matter, and which can be followed into the plasmatic spaces. They are sometimes detected at the periphery of the caseous mass, lodged as it were in recesses, which almost seem to be of their own formation. I have never discovered any evidence at the circumference of cavities of a cell traffic comparable to that which I have just described. Cell migration, if it occurs, takes place in the opposite direction: from the tissue into the cavity.

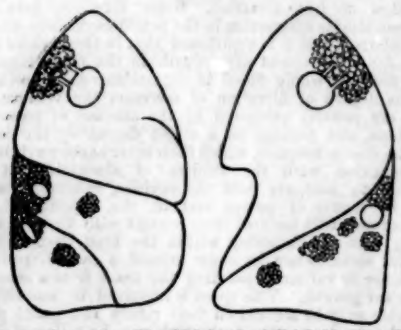
Whether active or slow, continuous or intermittent, the slight absorption occurring through the walls of cavities has for its consequence a progressive thickening of the surrounding lung-tissue proportionate to the irritation. I readily admit that mechanical factors have a share in promoting the fibrosis. So contractile an organ as the lung cannot with impunity be retarded in its movements by the presence within it of patches of consolidation or by the uneven traction from a thickened or adherent pleura. These mechanical agencies must, however, be considered as secondary in importance to the more subtle influences of chemical irritation.

Formation of simple fibrous tissue is but one result of irritation by absorption. I propose to devote a few remarks to another more important consequence arising from the same cause. I refer to tubercle, and first to that form of tubercle which is observed with great frequency in the immediate vicinity of the cavity wall. Tubercle in this situation is clearly local and secondary. We are familiar with its exact analogon in the trachea. When in a case of excavation at the right apex we find the trachea deeply ulcerated and tubercular at a point of its left wall, about one inch above the bifurcation, in a line with the axis of the right bronchus as shown in the diagram (see Fig. 4), we possess a proof of the formation of secondary tubercle under the direct influence of a primary excavation. A wholesale ulceration of the trachea, and even of the larynx, occurring under similar circumstances, is capable of the same explanation. These observations are of extreme importance as establishing the causation of tubercle from the direct application of the contents of a cavity to the healthy mucous surface. If the comparatively resistant structures of the trachea suffer such marked lesions from this form of irritation, how much more decisive must be the effect produced on the tender wall of the alveolus or on the bronchiole?

Thus we are prepared for the recognition of a form of secondary pulmonary tubercle purely irritative in its origin, not necessarily arising in visible contact with the primary disease, but capable of being generated at considerable distances from it by the impact of air contaminated with the products of disintegration; and it may be incidentally stated that such is the usual origin of the bunchy or racemose tubercle. Another link in this chain of evidence is supplied by the local tuberculosis observed in the walls of the bronchiectatic cavities; from cases of this nature the suspicion of pre-existing tubercle, independent of the cavity, is absent conveniently to our purpose. These local tubercles do not widely differ in aspect from those belonging to a more generalised tuberculosis which often affects the pulmonary tissue at a later date, and there is, I believe, no escape from the conclusion that their presence is indicative of the direct causation which I seek to establish.

But let us return to a consideration of the ordinary phthisical cavities. Bordering upon the latter I have almost invariably found large dense masses of tubercle resembling by their pigmentation, by their firmness and by their tendency to fibrosis, the usual racemose deposits. From these,

FIG. 2.



Masses of secondary "local" tubercle at distal side of cavities.

however, they differ both in their size and in their shape; they present a wider expansion and a cuboidal rather than a spherical outline. The position in which they are found is remarkably constant in relation to cavities. Their seat of election is the upper axillary border external to the cavity so usually found in the outer part of the upper lobe; and they extend from the external wall of the cavity to the visceral layer of the pleura. Next in frequency of occurrence is a tubercular mass in the middle third of the axillary region, commonly filling the wedge-shaped summit of the lower lobe. This mass borders upon the cavities which I have shown to be so constant in the dorso-axillary region. Lastly, I have frequently found a smaller mass at the outer apex, as a dependency of a vomica which did not reach the summit of the lung. The reason for the uniformity of these situations will be readily perceived if we refer to the diagram of the bronchial distribution. A line drawn through the bronchi supplying the upper axillary region will be seen to traverse the cavity situated in the upper lobe; similarly, the bronchus belonging to the lower axillary region is interrupted by the dorso-axillary excavation, and the same relation subsists at the apex. With the help of these observations we can readily appreciate the cause of the tubercular masses. The tubercle is a local consequence of the chronic cavity. At its distal aspect the cavity-wall intercepts a set of nearly parallel bronchioles through which irritation is conveyed to the terminal air-sacs, and the cuboidal extended shape of the resulting tubercular deposit is a simple consequence of the mode of its origin. The great constancy of the axillary deposit is obviously connected with the active respiratory function of this part of the lung, owing to which some irritating matter is inevitably drawn to the periphery along the divided bronchioles.

Much more difficult to explain is the sporadic miliary tubercle so often affecting the lung towards the termination of cases of pulmonary excavation. Two theories have been advanced in connexion with this secondary miliary tuberculosis, the one based upon lymphatic conduction, the other resting upon the assumption of a virus circulating within the vessels. It is not my intention to deny the existence of a lymphatic irritation such as described by Dr. D. J. Hamilton in his lectures on Catarrhal Pneumonia and Tubercle, in connexion with secondary pulmonary tuberculosis. But, however marked an influence conduction along the lymphatics may possess within restricted areas, a mechanical difficulty opposes the view that the lymphatic stream from a small cavity in the upper lobe could affect the lower lobe; just as in scattered tubercle it would be difficult to account for the large intervals of healthy tissue which in reality occur. Against the view of lymphatic conduction should also be mentioned the frequent immunity enjoyed by the pleura. Dr. Hamilton describes the pleural surfaces as universally adherent in secondary pulmonary tuberculosis. Such is not my experience. In not a few instances I have found the lungs free from adhesions, although pervaded with miliary tubercles.

The doctrine of the propagation of tubercle through the bloodvessels has long acquired a firm footing in science. It is supported by the results of experimental inoculations, of intravenous injections, and by the frequent recognition of a tubercular activity in the walls of the vessels themselves. This theory lends itself better perhaps than any other to an explanation of generalised tuberculosis. In my opinion, tubercle may originate, and does originate, in vessels; but the germs of the disease need not be contained within their lumen. The vessels may inflame from causes external to them, as well as from those which act internally. In the rare cases in which a distinct tubercular embolon occludes a vessel we perceive a sufficient reason for the localisation of the lesion; but in the great bulk of remaining instances we are left to seek an explanation for the development of tubercle rather at one spot than at another.

In the lung the localising agent appears to be contained within the bronchus. Dr. Reginald E. Thompson in a paper on the auto-infection of the lung as a cause of tubercle (THE LANCET, 1878, vol. ii., page 38), dwells upon the influence of inhalation and of gravitation on the production of the disease, and Rindfleisch in support of his theory of an infection of the lung by its own secretions describes the mechanism of this infection, and places the seat of the earliest deposit at the spur separating two ultimate bronchioles. Tappeiner's experiments on the artificial inhalation of tubercular matter, in which the dogs submitted to the poisoned atmosphere developed tubercle, afford direct support of the view which has been mentioned.

I confess that this theory of inhalation is inadequate to explain the sporadic nature of the miliary eruption and its presence in regions which are not distinguished by any great respiratory activity; but yet more improbable would appear the hypothesis that the tubercular infection originating in a cavity should perform the great circuit of the circulation without generating tubercle, finally to settle once more upon the lung. Whichever way we turn we are driven back to an assumption of predispositions. There exists a general predisposition to tuberculosis peculiar to the race, to the family, and to the individual; and there exists in the economy an organic predisposition probably varying with age, but which in the adult usually has its seat in the lung. The nature of the determining cause still baffles our search in the case of acute miliary tuberculosis; but in the other varieties the localisation of the tubercle usually depends upon irritation of a coarser nature lending to the deposit its characteristic features, situation, and shape.

I have attempted briefly to describe the anatomical peculiarities of cavities, and some of their results. I must now pass to a study of their subsequent growth and multiplication.

In the early stages of excavation the most frequent mode of *extension* is by simple coalescence of neighbouring vomicæ. The intervening tissue, thinned by ulceration, finally gives way at the weakest point, and the resulting communication rapidly widens, until little remains of the original separation. A similar perforating process may affect the interlobar septum, and throw the cavities which it separates into a huge vomica; often, however, the ulceration of the septum is due to the rapid extension of a single cavity situated above it into the lower lobe, as yet free from disease.

Two vomicæ situated on the divisions of the same bronchial stem sometimes coalesce by an ascending ulceration of their respective bronchi. The latter are destroyed as far as the bifurcation of their apparent trunk, which then opens directly into the vomica.

In a third variety, a cavity in the course of its extension

encroaches upon a neighbouring bronchial territory, laying open some of the bronchioles. Respiration, which is comparatively more active in the invaded district, hitherto healthy, will lead to an inhalation into the latter of the contents of the cavity proportionate to the strength of the inspiratory current. Excavation, usually of a moist and rapid kind, will necessarily ensue, and involve the whole bronchial district in question. I have illustrated by means of a separate diagram this important mode of the extension of the disease.

The three varieties to which I have alluded are all peculiar to young cavities still in process of formation. The increase in size of the fully formed vomicæ is much more gradual, and generally due to the slow necrosis incessantly at work within them. Occasionally, however, in consequence of the necrosis, outlying caseous masses may be exposed to the action of the air, and a somewhat sudden extension of the main cavity may take place at their expense.

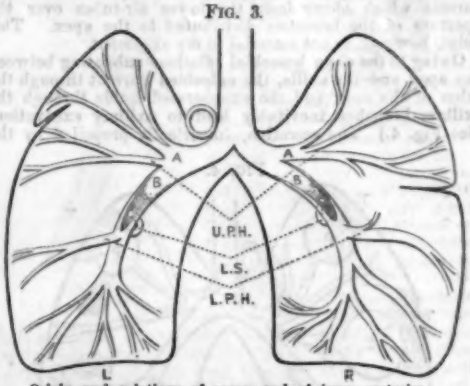
Rindfleisch ascribes the growth of cavities to the influence of atmospheric pressure. His theory cannot be better stated than in his own words: "The cavities, therefore, continue to enlarge until they reach the pleura, which then usually becomes thickened, and forms their definite limit. The larger they become, so much the more exclusively will the inspiratory force destined for that portion of the lung be expended in making them still larger. Like the torn edge of a veil, the remaining parenchyma contracts, and is drawn in partly to the periphery and partly to the root of the lobe. It serves then to fill up all the corners which are left between the convex surfaces of the cavities, and to restore somewhat the contour of the lung."[1] I confess my inability to reconcile this account with my own observations. In excavation we have become acquainted with a gradual process, ill-comparable to laceration. Again, far from retracting towards the root of the lung, the spongy tissue rather tends to crowd around the vomica. It is the cavity itself which retracts towards the root, not the alveolar tissue. My criticisms are more especially directed against the supposed distension of the cavities under atmospheric pressure. I disagree with Rindfleisch on the fundamental point of the assumed yielding of the cavity wall. Whosoever will inspect the limiting membrane of a tuberculo-pneumonic softening will be readily convinced of the comparative toughness of this membrane, which is capable of resisting a greater force than the slight variations in pressure induced by inspiratory efforts. If with these tough structures the delicate alveolar wall be compared, it will become apparent that the atmospheric pressure would dilate the latter rather than the cavity. Exclusively occupied with the elasticity of the spongy tissue, Rindfleisch appears to have lost sight of its remarkable expansibility. As long as alveolar substance remains to fill up the space created by inspiration, the atmospheric pressure cannot influence the cavity. I shall have occasion to revert to this point, and to show that the great disproportion between the resistance of the cavity wall and that of the alveolus favours the contraction rather than the dilatation of the vomica.

Cavities in the progress of phthisis tend to increase in *number* as well as in size. The position of the younger cavities is not entirely the result of chance. The prevalence of cavities in the dorso-axillary region, to which I alluded in my last lecture, points to an element of regularity even in the later development of phthisis, and to the operation of definite causes, which we may study with profit. A recognition of the extension of the disease, from the apex downwards, was among the earliest results of improved methods of investigation. In one sense this is but a corollary of the proposition so prominently asserted by Louis as to the frequency of apex-phthisis. The position of the secondary mischief not only beneath, but in the vicinity of, the primary lesion could not fail to be construed in the sense of extension by continuity, and this impression, if I mistake not, is still uppermost in the minds of many. The existence of a progressive tendency in phthisis it is not in my power to deny, but I venture to oppose the view that inflammation necessarily extends by continuity of structure. Among the achievements of modern medicine we can point with just pride to the recognition and to the furtherance of the curability of phthisis. It is now very generally admitted that pulmonary consumption may sometimes be arrested. We have all witnessed the progress and the recession of pulmonary vomicæ. This curability, special to some cases, rests entirely upon the local character of the lesions. In these cases the disease is obviously not propagated by a creeping process.

The mechanism of the reproduction of cavities from above downwards, especially in the axillary region, will be best understood from a glance at the physiological and anatomical conditions, which so often contain the solution of pathological problems; just as the affections of the kidney are chiefly connected with their secreting duties, the affections of the liver with its functional activities, so with the lungs, most of their diseases are influenced by their function of aeration. The respiratory energies undoubtedly vary in different parts. This can be proved indirectly by stethometry. Dr. Ransome's tables conclusively show that different excursions are performed by the various points of the surface of the thorax. Collateral proof of the same fact is supplied by the atrophic changes which the lung undergoes in old age when the requirements fall short of the available breathing space. The atrophy affects definite regions. Hourmann and Dechambre[2] have shown that the middle lobe is relatively more wasted than other parts. This observation points to a comparative loss of function in this region. In the healthy adult differences can easily be detected in the regional activities of the lung. If the respiratory capabilities of the various parts of the chest be tested by the combined methods of auscultation and of surface measurement, we arrive at the following results. Respiration is most active in the lower lobe, least active at the apex and very active in the axilla, whilst it gradually diminishes towards the sternal border.

The importance attaching to these relative respiratory values will become evident when I have pointed out the peculiarities of the bronchial distribution. You will observe, from an inspection of Fig. 3, that on either side the

FIG. 3.



Origin and relations of *upper* and of *lower posterior-horizontal* bronchi (other branches not accurately given). — A, Bronchus to the apex. B, Bronchus to the base. U.P.H., Upper posterior-horizontal bronchus. L.P.H., Lower posterior-horizontal bronchus. L.S., Lower sternal bronchus.

main bronchus divides essentially into two branches, the upper (A) being destined for the apex, and the lower (B), which is more strictly speaking a continuation of the main bronchus, supplying its divisions to the base. In any careful dissection, horizontal branches will be seen to traverse the back of the lung from its root to the axilla. In either lung two of these are present; I will call them for convenience the *upper* and the *lower posterior-horizontal bronchi*. The anatomical differences between the lungs occasion a corresponding difference in the origin and distribution of these tubes. The right upper lobe, possessing posteriorly a greater height than the left, includes the upper posterior horizontal bronchus, which takes a direction parallel to the septum and immediately above it; whilst the lower posterior horizontal branch occupies a similar position in the lower lobe. In the left lung these branches both belong to the lower lobe, which rises considerably higher at the back than the right lower lobe. The upper branch is by far the more important on this side, but the relative size of the two branches is liable to vary.

[1] Chronic and Acute Tuberculosis. Von Ziemssen's Cyclopædia, vol. v., pp. 679–680 (American translation).

[2] Recherches Cliniques pour servir à l'Histoire des Maladies des Vieillards; Maladies des Organes de la Respiration: Archives Générales de Médecine, ii., tome 8, page 417.

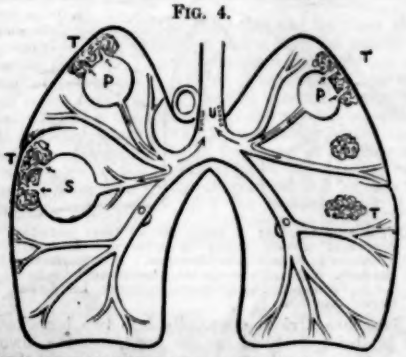
The origin of the upper posterior-horizontal bronchus differs widely on the two sides; whereas on the right this bronchus is a branch of the bronchial stem A, on the left it usually opens immediately beneath A into the main bronchus continued. I have witnessed its occasional derivation from A, but would consider this an abnormality. The lower posterior-horizontal bronchi present no differences; on both sides they originate in the posterior wall of B, rather more than one inch below the primary division, being the first tube given off by B, with the exception of the bronchus (L S) destined for the lower sternal region, which has its orifice in the anterior wall.

I would call your attention specially to the close relation existing between the upper branches and the bronchial supply to the upper lobe, and also to their rigidly patent circular orifice, a peculiarity which they share with the bronchial tubes of the apex. All branches originating below this point present a somewhat flattened oblique orifice, the patency of which is probably subject to variations. The posterior wall of the bronchus from which the lower branch arises is liable, owing to its position, to be clogged by viscous secretion during the hours of sleep, when sensitiveness of the membrane is lessened, and mucus would the more readily cling to this surface on account of its fine rugæ. The implication of the lower branches is, however, an event subsequent to the excavation in the distribution of the upper, which I propose to consider first.

In cases of excavation at the apex, over-action and ultimate distension of the axillary region result in proportion to the loss of respiratory power at the summit; thus the velocity of the air-current destined for the axilla will be rather in excess of the velocity in the apex-bronchus. Dr. Reginald E. Thompson would even assume that the ventilation of the apex is mainly dependent upon the stronger current which blows from the lower air-tubes over the aperture of the bronchus distributed to the apex. This point, however, is not material to my argument.

Owing to the close bronchial relations subsisting between the apex and the axilla, the enfeebled current through the tubes of the apex and the exaggerated traffic through the axillary branches inevitably lead to axillary excavation. (See Fig. 4.) The secretion, imperfectly propelled by the

FIG. 4.



Mode of origin of secondary cavities in dorso-axillary region. Local tubercle as in Fig. 2. Local tubercular ulceration of trachea.—P, Primary cavity. S, Secondary cavity. T, Tubercle. U, Tracheal ulcers.

deficient expiratory effort of the diseased apex through the main upper bronchial division, is in danger of being sucked, by the deep inspiration which succeeds cough, into the neighbouring bronchus which supplies the axilla. That such a result really follows is rendered highly probable by the shape of the early consolidation, by its microscopical characters, and by its subsequent history. The early deposits are quite distinct from ordinary catarrhal pneumonia. They do not involve a whole lobule, forming a polygonal patch of tolerably even consolidation, but distinctly occupy a bronchiole and two or three of its terminal divisions; hence the trefoil appearance of the nodules, so often described. In strict harmony with this view of their origin nodules occur in groups in the district of a bronchial division of moderate size, which is often thickened in the vicinity of the deposit for a short distance, but higher up is practically free from disease. The nodules present a remarkable combination of very perishable catarrhal cells, with a well-defined fibroid cell-growth and with giant cells; in fact, they unite the characters of a tubercular with those of a catarrhal inflammation, and are consequently liable to a moister and more rapid softening than is possible in pure tubercle. In the axillary districts thus infiltrated by deposits and deprived of expiratory vigour, excavation is brought about in the following manner. A small bronchus, under the irritation of the residues of imperfectly expelled secretions, becomes the centre of considerable congestion, ultimately ulcerates, and opens up the chief bronchus of the district at a point above the nodular masses. From this point the softening rapidly extends to the mass itself, which is destroyed by maceration rather than by true caseation.

Such is the history of the common dorso-axillary cavity. The cavity is subject to variations as to its exact position; it often originates in the mid-dorsal region, or it may begin at the side and subsequently extend into the back. These differences are mainly determined by the course taken by the inhaled particles, either into one or into the other bronchiole. Cavities in this situation are commonly destitute of trabeculæ. This is probably the result of the early undermining of the chief bronchus of the district, which I have attempted to describe.

The extent of the irritation set up by insufflation of the secretion of cavities depends, as I have elsewhere stated, upon the regional activities of respiration. The axillary district, which is remarkable for its respiratory capabilities, is also distinguished by the frequency within it of secondary changes. Secondary tubercle in this region invariably occurs on the distal side of the cavity—that is to say, rather to the front than to the back of the axilla; and if a transverse section be carried through the lung parallel to the front of the chest, it will divide the tubercle in the angle of the lower lobe situated between the septum and the axillary border. The mass of tubercle encountered by the section is often but the zone of irritation of a cavity which a deeper section will bring into light. In proportion as the cavity extends and intercepts fresh bronchi, the tubercular mass progresses towards the sternum; and if time be allowed, the greater part of the outer portion of the lower lobe may become infiltrated by bunchy tubercular deposits.

I have attempted to explain, on the data of physiology, the common mode of extension of the phthisical process to the mid-region of the lung, and have clearly shown, I hope, that in the majority of cases phthisis is not due to gradual creeping of inflammation, but to the following sequence:—1st. Nodular consolidations from the irritation of inhaled particles. 2nd. Loss of respiratory activity, and diminished expiratory current in the corresponding bronchioles, whilst the infecting influence continues unabated. 3rd. Acute irritation of the small tubes from stagnation, ending in their ulceration. 4th. Deposition of secondary tubercle on the distal side of the cavities thus formed.

The disastrous agency of insufflation of morbid secretions from vomicæ is not limited to the production of a dorso-axillary cavity. Some of the lesions belonging to the latest stages of phthisis are under the same influence. With the progress of disease the increasing respiratory distress renders the unaffected regions more and more liable to inhalation of secretion. During the attacks of dyspnœa, which mark the last days of the unfortunate patients, the expiratory efforts of the diaphragm produce an appreciable current towards the sternal and basic fringes; and abundant secretion is drawn and impacted into the distended alveoli. The resulting pneumonic masses present well-marked characters: as large as a pea, or as an almond, they stand out boldly in the midst of the hyper-inflated tissue; and they are remarkably deficient in colour, probably owing to the anæmia induced into the pulmonary alveoli from distension. In these respects they present a striking contrast with the deposits due to more chronic irritation. The softening of these masses, if death should be sufficiently delayed, and if œdema should supervene, proceeds with great rapidity.

The lesions which I have last described occur so late in the disease that their recognition is seldom possible, nor is this of any special importance. Of vital moment is, on the contrary, the discovery of a cavity in the axillary region. The absence of this lesion in any case of phthisis adds greatly to the chances of the patient; its existence in cases where youth or a naturally strong constitution does not establish a redeeming influence is almost equivalent to a warrant of death.

CASES OF REMOVAL OF OSSEOUS TUMOURS FROM THE AUDITORY CANAL.

BY GEORGE P. FIELD, M.R.C.S.,
AURAL SURGEON TO ST. MARY'S HOSPITAL.

IN October, 1877, I operated successfully on Dr. M——, of Waterford, for ivory exostosis in both ears[1] by means of the American dental engine, the employment of which in such cases was first suggested by Dr. Arthur Mathewson, of Brooklyn, New York. The canal in each ear was filled up with a very large growth, resembling a boil, and taking origin from the posterior wall, so that the ticking of a watch was inaudible, except on contact. In this, my first case, the density and size of the tumours rendered the six operations extremely tedious; altogether the patient was seven hours under chloroform and ether.[2] The symptom of a distressing feeling of fulness in the ears was here accompanied by great depression of spirits, owing to the patient being debarred from medical practice, and to his knowledge of the density which characterises an aural exostosis. Hearing was regained in both ears as a result of the operations, and up to the present time has remained perfect.

My next case of double exostosis, Mr. S——, a gentleman in the Royal Navy, like my first, was accustomed to bathe regularly in the sea. From this fact I was led to conjecture that this disease, instead of being invariably due to gout, rheumatism, or syphilis, or being influenced thereby, as Grüber has maintained, is more often the result of a chronic inflammation of the walls of the external meatus, such as might be produced by sea bathing. In neither of these cases was there any trace of gout or syphilis. I was confirmed in my opinion by the next two cases of double exostosis which came under my care, viz., Mr. T——, a celebrated actor, and his brother, a medical man, who were both in the habit of bathing constantly in sea water.[3] This mechanical irritation also may be set up by otorrhœa, and so give rise to osseous tumours. I have at the present time a gentleman under my care, sent to me by Dr. Moore of Ipswich (Dec. 20th) with a large ivory growth in the right ear, no doubt the result of a chronic discharge of long standing. In this there is no history of gout or syphilis. In my next case, published in THE LANCET, Jan. 8th, 1881, there was complaint of severe deafness attributable to the filling up of both ears by a compact

FIG. 1.

Drills of various sizes used in the operations.

bony growth. The case presented features exactly similar in almost every respect to Dr. M——'s. I operated five times—namely, on Jan. 29th, Feb. 11th, March 2nd and 24th, and April 17th, 1880, drilling through the growth with the dental engine, thus procuring perfect restoration of hearing in both ears.

In April, 1881, I was consulted by Mr. H——, who for several years had been in the habit of bathing daily in the sea, and had a large ivory exostosis occluding the left external auditory meatus. Some time previously he had through an accident completely lost hearing in the right ear, so that he had now become very deaf. On finding that his left ear was failing him, he had placed himself under the care of Dr. M——, of Waterford (my first case), who not unnaturally recommended him to come to me. Mr. Dalby, to whom I showed the case, agreed with me that an operation would afford the only chance of restoration of hearing. I accordingly, on April 27th, the patient having been placed under the influence of ether, operated with the dental engine as on previous occasions.[4] Mr. Dalby, Dr. Sherfy, of New York, and Mr. Malcolm Morris were present.

A slight accident occurred in the course of the operation, which, as it caused some delay, it is well to mention. The steel guard (see Fig. 2) which I was using broke, leaving a

FIG. 2.

Metal guard (side view).

FIG. 3.

Metal guard (front view).

portion so firmly wedged in the ear, that I had considerable difficulty in removing it. Fortunately, by employing an iron guard I had with me (which I had used on previous occasions), I was able to continue the operation, which on another day (May 4th) I brought to a conclusion. The guard, I would suggest, should always be made of a metal which will bend, but not suddenly snap or break, on the application of any extra force. Recovery in this case, as I have found in others, was for a time retarded by the growth of granulations.

Miss M——, aged nineteen, a case sent to me by Dr. MacMunn, after experiencing deafness for some time, had latterly felt a hard substance in the right ear, looking exactly like a tooth. So deaf was she that a watch could be heard only when pressed to the auditory meatus. On

FIG. 4.

Pedunculated osseous tumour arising from anterior wall of external meatus.

FIG. 5.

Multiple exostoses, leaving a triangular space between the apices of the tumours.

Sept. 20th, 1881, having placed her under chloroform, I discovered that the growth she had noticed arose from a small pedicle from the posterior wall of the meatus, but

[1] See THE LANCET, July 20th, 1878.

[2] I may mention that where the base of the bony growth is small drilling with the dental engine takes but a short time. In a case of this kind, which I treated on June 2nd, 1880, the operation lasted fifteen minutes (see THE LANCET, Jan. 8th, 1881).

[3] This view was alluded to in the Presidential address on this subject at the International Medical Congress in London, 1881. Exostoses are commonly found in the ears of the crania of the Hawaiian islanders, a race said to be almost amphibious.

[4] For fuller description of the operation, see paper by the author in THE LANCET of Jan. 15th, 1881.

was not movable on pressure. Having broken this off with a pair of stump forceps, such as are used by dentists for the upper jaw, I discovered another growth attached by a pedicle to the *anterior* wall.[5] (Fig. 4.) This I treated in the same way, and hearing was thus restored to the patient. I had previously removed some osseous tumours by wire,[6] but the forceps I found more serviceable. Von Tröltsch recommends Wilde's écraseur for the removal of pedunculated growths. In some instances of multiple exostoses[7] (Fig. 5) a triangular space is left between the apices of the tumours, which, growing from opposite sides of the canal, become wedged together, so that its aperture cannot be completely closed up. Severe deafness is often caused by the filling up with wax of the narrow passage which is left. This can easily be cleared away, and the hearing then becomes fairly good. In such cases I should never recommend an operation.

My experience is borne out by Dr. Delstanche of Brussels. In an able contribution to the study of the osseous tumours of the external auditory meatus (translated by Dr. Cassells, *Med. Press and Circular*, Aug. 6th, 1879), he says, "Since Bonnafont, Miot, and Field have shown by their successes the shallowness of the fears which were inspired by the proposed operations on the osseous tumours of the external ear, practitioners, encouraged by their results, are no longer content to make a narrow passage—they desire to do more in order to augment the diameter of the perforation. ..... It would be, besides, impossible to trace out an immutable line of conduct in the treatment of the tumours in question, because what succeeds in one case does not succeed in another, and it is often necessary to employ a variety of means before obtaining the desired results."

Bony growths in the ear may be most satisfactorily classed as—

I. Circumscribed tumours, or exostoses made up of soft bone, with a pedicle.

II. Diffuse tumours, or ivory exostoses (hyperostoses), hard in consistence. The etiology of aural exostoses I have described in former papers.[8]

The conclusions to be obtained from a consideration of the above mentioned and similar cases which have come under my observation may be summarised as follows:—

1. Where there is one tumour of the consistence of ivory occluding the canal, the only operation of any permanent service is that of drilling through the growth by means of the dental engine.

2. It is advisable in the drilling to use a metal guard, such as I have described, to pass behind the tumour, in order to lessen the risk of any accident.

3. Where there is more than one tumour, operations of this kind are as a rule unnecessary, since in the case of multiple growths a triangular channel is usually found which may be kept open by other means. (See Fig. 5.)

4. In a very great majority of cases of aural exostoses there has been no history of gout, rheumatism, or syphilis.

5. Some bony tumours in the ear, although filling up the external auditory meatus, are attached by a small pedicle, and can be easily removed, as in cases I have related.

6. A mechanical irritation, such as is caused by the presence of put in the meatus, or such as might result from the effects of frequent sea-bathing, as I have pointed out, is often a source of osseous tumours.

7. In the case of imprisonment of purulent discharge in the tympanic cavity by means of a growth of bone filling up the auditory meatus, and consequent production of grave symptoms, an operation is imperative.[9]

8th (and lastly). If from the closing in of the auditory canal in both ears by bony growths very severe deafness ensues (as in the cases of Dr. M—— and of Mr. S——), an operation is called for. If the hearing in one ear is good, removal of an exostosis or hyperostosis for the relief of deafness in the other ear is not to be recommended, unless the existence of a pent-up purulent discharge within the tympanum be suspected. But obviously in such cases as that of Mr. H——, who from an accident had completely lost his hearing in the right ear, and subsequently, in consequence of a bony tumour filling up the passage of the left, had become too deaf to follow his occupation, an operation can hardly be dispensed with.

Lower Seymour-street, W.

[5] Some authors think that exostoses are movable on pressure, even when complete ossification has occurred, and always have their point of attachment on the posterior wall. This is not borne out by my experience in the patient just mentioned, or in my case of Miss H—— (THE LANCET, Jan. 8th, 1881), where a growth of soft bone (see microscopical appearance) was found attached to the anterior wall.

[6] Brit. Med. Jour., Dec. 15th, 1877.

[7] Every case of osseous tumour of the meatus must be treated according not only to the form and density of the growth, but also to the symptoms which arise.

[8] See Brit. Med. Jour., Dec. 15th, 1877, and THE LANCET, July 20th, 1878. There is also an excellent paper by Dr. Cassells, Brit. Med. Jour., Dec. 1877, and in the Transactions of the International Medical Congress, Section Diseases of the Ear.

[9] See case related by Dr. Orne Green, of Boston, in the Boston Medical Journal of April 18th, 1878.

ON

SOME RARE MANIFESTATIONS OF SYPHILIS IN THE LARYNX AND TRACHEA.

BY FELIX SEMON, M.D. BERLIN, M.R.C.P. LOND.,
ASSISTANT-PHYSICIAN FOR DISEASES OF THE THROAT TO ST. THOMAS'S HOSPITAL.

THE following cases of syphilitic disease of the upper respiratory passages, which have come under my observation in the course of last year, are considered deserving of being recorded, partly on account of the uncommon forms in which the disease made its appearance, partly on account of the rare combinations of unusual morbid changes observed, especially in the first and second cases, and, thirdly, because all of them offer an opportunity for some more general considerations with respect to diagnosis, prognosis, and treatment.

CASE 1. *Subglottic Syphilitic Tumours (Condylomata? Gummata?); Acute Inflammatory Œdema of both Vocal Cords; Bilateral Impairment of the Action of the Glottis-openers; Dyspnœa; Dysphonia; Cure.*—T. D——, aged twenty-three, horsekeeper, a middle-sized, pale young man, with a frightened look, and in a state of great anxiety, came on Feb 3rd, 1881, to my out-patient department at Newington-butts, to consult me about great distress in breathing, which he stated he had felt for about a week, and which had rapidly increased during the last few days. He added that he had been hoarse for some little while before the difficulty of breathing came on, and ascribed the latter symptom to exposure and to having neglected a "cold." The patient further added that he had always enjoyed good health up to about one year ago, when he had a "hard chancre," followed later on by a painless swelling in his left groin, and some months later by some spots on his forehead and forearms. He had been treated for the primary disease (which had been named as above by his medical attendant), but he had not been attended for the eruption which in part still existed, whilst many of the spots had disappeared. There was no history of sore-throat, ulcers on the tongue, &c.—in fact, the throat affection was, in the patient's opinion, simply due to exposure, free living (he drank hard), and neglect. All these statements were made in a scarcely audible hoarse, gruff whisper, interrupted by frequent noisy and deep inspiratory efforts, whilst expiration was altogether unaffected.

Examination of the affected parts revealed the following state of things. The pharynx was anæmic, but showed no traces of either recent or old ulcerative disease. The epiglottis, ventricular bands, ary-epiglottic folds, and the mucous membrane over the arytenoid cartilages and the inter-arytenoid fold presented the same anæmic appearance, but were otherwise quite healthy. A marked change had, however, taken place in the structure, colour, and movements of the vocal cords. They were highly œdematous, so much so that their normally flat upper surfaces were quite rounded, so that they looked semi-cylindrical; their colour was changed into a bright semi-transparent red; and their outward movement was so defective that, on attempted deep inspiration, they did not separate even up to the cadaveric position. Strangely contrasting with this bright-red colouration, there was seen, when the chink of the glottis opened, a pale, yellowish-grey, somewhat irregular swelling protruding into the interior of the larynx from immediately under the posterior two-thirds of the left vocal cord. The base of this swelling never becoming visible, I could not make out whether there were *two* tumours close to each other, a smaller anterior and a larger posterior one, both semi-globular in shape, or whether there was but a *single* tumour divided by a furrow into two unequal parts. The anterior portion was the size of a small pea, the posterior being somewhat larger. The tumour or

tumours originated apparently from the left lateral and the posterior walls of the subglottic compartment of the larynx, and not from the under surface of the left vocal cord itself, as they did not move together with the cord on deep inspiration, but became the better visible the deeper the patient tried to inspire—i.e., the wider the glottis opened above them—which was, as stated, but very little. There was *no* inspiratory sucking together of the vocal cords in this case, as is almost always observed in the higher degrees of bilateral paralysis of the abductor muscles.

On repeating the examination with the aid of the limelight at my own house the next day, I found that the surface of these subglottic swellings was not, as it had seemed to me at first, superficially ulcerated, but smooth and apparently still covered with normal epithelium. Moreover, on this occasion and once or twice on examination made during the next few days, it seemed to me, especially when the mirror was held a little obliquely, as if there were some similar, only smaller, greyish projections from under the posterior part of the *right* vocal cord. But I cannot vouch for the absolute certainty of this appearance, inasmuch as the laryngoscopic examinations during the first stage of the disease were necessarily short on account of the patient's dyspnœa; while later on, when the first effects, presently to be described, of the treatment had begun, and when he tolerated the mirror better, I could no longer detect them. It will be seen further on of how very great an importance in every respect it would have been could I have positively verified their existence. In all other respects I had occasion to verify my first observations.

With the exception of some erythematous efflorescences of evidently not very recent origin on the forehead, as well as of a hard indolent swelling in the left groin, there were no other signs of specific disease about the patient, nor could anything be elicited concerning former swellings in the skin, bones, lymphatic glands, periosteal pains, &c. The result of the examination of the rest of his body was entirely negative, though it may be stated that the respiratory sounds in the upper parts of both lungs were completely masked by the laryngeal stridor.

Diagnosis.—Laryngeal stenosis due to—(1) Subglottic syphilitic tumours (condylomata? gummata?); (2) œdema of the vocal cords; (3) insufficient abduction of the vocal cords. (The reasons for arriving at this diagnosis will be given further on.) The patient's dyspnœa being very urgent, even when he was at rest, and being further aggravated by being moved about, and the three causes of the stenosis being evidently capable of sudden further increase, which might have led to a fatal issue, he was taken into the hospital on Feb. 5th, and at once subjected to very energetic syphilitic treatment, the gravity of his position and the possible necessity of tracheotomy having been fully explained to him. The treatment consisted in the internal administration of ten grains of the iodide of potassium and one drachm of the solution of the perchloride of mercury, per dose, three times a day, being gradually increased during the month he stayed in the hospital up to forty grains of the iodide and two drachms of the mercury three times a day. Simultaneously an inunction treatment was instituted after Zeisl's plan—i.e., twenty grains of mercury ointment were daily rubbed into various parts. On the first day the ointment was applied to the skin of the neck over the larynx; second day to the inner surfaces of both upper arms; third day to the inner surfaces of both thighs; fourth day to the inner surfaces of forearms; fifth day to the inner surfaces of both calves; sixth day to the skin over both loins; seventh day to the skin of the back. This series was repeated four times in the same order, each series being preceded and followed by a warm bath, and astringent gargles being used, as a matter of course, during the whole time. No salivation, no iodism, nor any other disagreeable co-effects were produced throughout the time of treatment. The patient applied during one month an ounce and one-sixth of the mercurial ointment, and took four to five ounces of the iodide of potassium, as well as five to six ounces of the perchloride. The effect of this energetic constitutional treatment, to which only occasionally sedative inhalations were superadded, was most marked and most interesting to watch. It so happened that I was giving at the time a course of laryngoscopic instruction at the hospital, and I gladly availed myself of the opportunity of showing the patient every time to the gentlemen who attended the class, in order to make them watch with me the very remarkable and pleasing gradual improvement, the progress of which corresponded almost mathematically to the proportions of the remedies employed. No doubt several of them, if they should happen to read this, will remember how the subglottic swelling *was the first* to gradually disappear, the cords still remaining hyperæmic, and their action impaired; how it became perceptible after about ten days, *when scarcely anything more could be seen of the subglottic swelling*, that the insufficient abduction of the cords in attempted deep inspiration, and with it the dyspnœa, improved; how, again, after the lapse of a few more days, the roundish, swollen appearance of the vocal cords, which had in the meantime become again more freely movable, gave way to the more usual appearance of an ordinary subacute congestion; and how obstinately this congestion—the last trace, in fact, of the severe disease—resisted both constitutional and local treatment (application of astringents).

When the patient left the hospital on March 4th, exactly one month after admission, his voice was still somewhat hoarse, and the vocal cords congested. He continued to attend for three months as an out-patient, taking, on my advice, though he felt quite well, iodide of potassium in gradually decreasing doses, and his vocal cords being painted once a week with a solution of chloride of zinc (thirty grains to an ounce). Towards the end of May he was dismissed cured; his larynx having by that time completely regained its normal appearance; his voice having become natural; and no sign of the specific affection being found present in any part of his body. I have not since heard from him, probably because no recurrence has taken place.

Remarks.—The many points of interest in this case might, perhaps, be conveniently grouped thus:—(*a*) Reasons for regarding the laryngeal disease as *syphilitic*. (*b*) The exact *nature* of the syphilitic tumours. (*c*) The unusual *combination* of three morbid changes, all rare in themselves (subglottic tumefaction, œdema of the *vocal cords*, impairment of their abduction), and each of them being by itself a sufficient cause for laryngeal stenosis; and their mutual *interdependence*. (*d*) The questions of *prognosis* and *treatment*.

(*a*) *Reasons for regarding the Laryngeal Disease as Syphilitic.*—It might be considered somewhat extraordinary that I at once came to the conclusion that the disease was of syphilitic origin, whilst there was so distinct a history of a catarrhal affection of the air passages, of exposure, neglect, or aggravation due to free living. My reply to this is, that under all circumstances I should have been very unwilling to believe in a *primary* œdema of the larynx due to *simple catarrhal* influences. Though the occurrence of such a possibility cannot be absolutely denied, a careful investigation of this question shows that, contrary to the common belief, idiopathic, primary, acute œdema of the larynx is excessively rare. According to Sestier's[1] excellent statistics on œdema of the larynx, simple inflammation was the cause of œdema in about only 6 per cent. of all his cases. And Dr. Morell Mackenzie[2] believes that in nearly all these instances of so-called simple inflammation the disease is due to blood-poisoning. At any rate, the occurrence of a *primary* acute œdema, as a simple outcome of an excessively violent catarrhal affection, must be classified among the greatest rarities. I have never seen a single such case, and I think that this diagnosis ought never to be made (1) without the aid of the laryngeal mirror, and (2) without all possible influences of a dyscrasic disease, such as syphilis, phthisis, Bright's disease, &c., having been eliminated. In the present case I was the more disinclined to believe in an independent origin of the œdema because of its very rare and unusual localisation. It is evident *à priori* that, if in consequence of an extraordinary congestion of an organ an actual infiltration of its tissues takes place, those parts will be most easily and frequently infiltrated which present the least resistance to the development of an infiltration. This general rule, which holds good for primary as well as for secondary *acute* œdema, finds nowhere more frequently practical corroboration than in the larynx, those parts of which where the mucous membrane is most loosely in contact with subjacent structures and most rich in connective tissue being, as experience shows, regularly the seat of predilection for œdematous infiltration. Thus, acute œdema affects most often the lax ary-epiglottic folds; after this the ventricular bands, then the submucosa of the epiglottis, and the mucous membrane over the arytenoid cartilages and in the inter-arytenoid fold, and only finally the vocal cords. (I speak, of course, of *acute* œdema only, for the chronic œdema accom-

[1] Traité de l'Angine laryngée œdémateuse. Paris, 1852.
[2] Diseases of the Throat and Nose, vol. i., p. 274.

panying—e.g., laryngeal phthisis or carcinoma, and due to distinctly local causes—does not follow this rule.) The above-given descending scale shows at the same time how unjustifiable in every respect the unfortunately still usual wholesale denomination of laryngeal œdema as "œdema glottidis" is. To begin with, what we call "glottis" is not a body but a space, and a space cannot be œdematous. But, apart from this, it appears from the above scale of frequency that the borders of this space—namely, the vocal cords—are least frequently of all the seat of œdematous disease. Surely it is desirable to give up such a misleading expression altogether, and to speak more precisely in every single case of œdema of the particular parts affected. In the case under consideration I had the exceedingly rare contingency of an *isolated* œdema just in those parts of the larynx which, according to their anatomical firm configuration, can be least expected to be the seat of an infiltration due to a general cause. Moreover, this infiltration was not of a simple serous, but of a decidedly inflammatory character. I had therefore *à priori* to look for some local irritation strong enough to produce such isolated, and at the same time violent, inflammatory symptoms in its immediate neighbourhood. This source of irritation was found in the presence of the adjoining tumours. I had the less doubt about their syphilitic nature because not only did they differ in shape, colour, and general appearance from all the other tumours, benign and malignant, which I have ever had the opportunity of observing in the larynx, but also on account of this very inflammation in their neighbourhood, the absence of which in the case of simple neoplasms is almost characteristic of the latter. Take in addition that, whilst primary acute œdema is so excessively rare in the larynx, its appearance in the secondary form is by no means a rare phenomenon in constitutional syphilis, as I have had myself[3] the opportunity of observing, and that I had not only a plain history but even a proof of constitutional syphilis in this case, the skin eruption in parts being still present, and it will be granted that there were strong reasons for concluding that the laryngeal disease was due to the constitutional disorder. The further course of this case is, I think, a proof of the correctness of this general diagnosis.

(To be continued.)

A GROUP OF SYPHILITIC INOCULATIONS CAUSED BY A SUCKLING INFANT.

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AT the end of January or early part of February, 1881, Mary D——, aged forty-five, presented herself among the casualties at the Sheffield General Infirmary. She sought advice respecting a sore on the upper part of the right breast a little distance from the nipple, and caused, as she said, by suckling a strange child, and in the manner to be referred to further on. An enlarged gland was detected in the axilla. The sore was indurated and was diagnosed by Dr. Porter, assistant house-surgeon, who saw the case, as a hard chancre. Under treatment the sore healed, but was followed by ulcerated throat, falling off of hair, and other symptoms of infection. On Aug. 5th she came among my patients at the infirmary for iritis of the left eye, which had apparently existed for some little time. Inquiry now elicited the following interesting train of facts.

The daughter of our patient, M. D——, and who we will speak of as A. K——, aged twenty-six, has been twice married. As the result of the first marriage, there were two children, the eldest, aged five, is still living and healthy, the other died aged four months of bronchitis. The husband is stated to have died of consumption. About eleven months from the time of our inquiry (that would be in September, 1880), she was confined of a healthy child, the father being the man to whom she has subsequently been married. Up to this time she had enjoyed perfect health. When, however, her baby was about three weeks old, she heard of a lady a little distance off who required a wet-nurse for her child. She applied for the situation, and obtained it. For one night she suckled both her own and her employer's baby (at her right breast), and the next day her infant was taken to Sheffield to be nursed by her mother, M. D——, who had herself an infant a few months o'd. A. K—— describes the baby she went to suckle as being about three months old, suffering from diarrhœa, much emaciated, with thrush also, and a "rash" on its body. This was the ninth child, and as all the others had died, the parents were particularly desirous of rearing this one. Another wet-nurse had already been engaged, but leaving, the young woman A. K——, I am referring to, took her place. She remained in the situation for about two weeks, suckling the baby only on the right breast (because I believe the milk had gone from the other), and then hearing that her own child was not well, she left and returned to Sheffield. She resumed nursing her baby, and shortly after her return noticed a soreness at the upper part of the right breast. In consequence of the discomfort this gave her when the child was put to the breast, she again sought relief from her mother, who partially suckled the child for her. This child, we are told, suffered before long from a sore place on its upper lip, followed by "thrush," and the eventual death of the child on April 23rd, 1881.

We return now to our original patient (M. D——). It would appear that she had almost weaned her own infant when she commenced to suckle her little grandchild, and that she used the left breast exclusively for her own and the right for her daughter's child. We have before traced this patient as applying at the infirmary with the primary sore on the right mamma, and referred to the subsequent constitutional symptoms. Previously to this time it would appear that she had had excellent health. Has been the mother of ten children, of which number seven are living. Of the three who died one succumbed at eight months to measles, another at two years and a half to small-pox, and the third at ten months to whooping-cough.

Shortly after she came first under my observation, I desired her to bring her daughter (A. K——), who happened then to be in Sheffield, to me. She did so, and the facts respecting her acting as nurse were elicited. I do not recollect finding a distinct scar on the breast, but there could be no doubt of her having been syphilised; she had suffered from "secondaries," and a specific roseolous rash was still on her. I may mention here that whilst, as I have stated, the baby of the daughter (A. K——) died,[1] the baby of the mother, being nearly weaned, and at the time she was suckling her grandchild, being nursed at one breast only, is alive and well.

I will now refer to the facts I have been able to learn respecting the suckling baby and its family, and this I am enabled to do by the kindness and courtesy of the family medical attendant, who has freely communicated with me on the subject; but I should add that he has not for long been in professional attendance, and the family history was in a measure hidden from him. At first the infant appeared healthy; it was brought up by hand, and except a tendency somewhat to snuffle, seemed to be getting on well until it was nearly three months old. Diarrhœa then set in; it became emaciated, and it is said assumed an "old look." As this was the last of nine children, all the others dying in the manner to be hereafter mentioned, the parents were particularly desirous of rearing this one, and with this object it was decided to procure a wet-nurse. It happened that in another family a young woman had just at this time been wanted also for the same purpose. The parents in that instance made every inquiry as to the character and otherwise of the nurse, and were perfectly satisfied. In consequence of the baby, however, not taking to this woman's breast, she at once left. Mr X——, the father of the infant in question, also satisfied himself as to the girl, and engaged her to suckle his child. The medical man says she was the picture of health, and so indeed was the baby. After a few days, from a Thursday to a Tuesday, in consequence of her milk disappearing, she left, and the Sheffie'd young woman (A. K——) came upon the scene, with the baby in the condition previously described. A roseolous rash immediately appeared. The nurse was warned of the risk she incurred, and desired if she remained, as the parents were anxious for her to do, to be particularly careful and cleanly as to the breast. These directions she neglected. There could be little doubt now that the child was suffering from specific disease, and under treatment with mercurials it improved,

[3] Trans. Path. Soc. Lond., 1880, p. 41.

[1] A. K—— has since had a miscarriage at three months.

and is now quite well. All Mrs. X——'s previous children had died. The first is stated to have died from hæmorrhage of the umbilicus; the second and third were stillborn at seven months; the fourth, fifth, and sixth lived until four or five months, and died, it is said, of some chest affection (?). The seventh died at nine months, the eighth was stillborn at seven months, and the ninth mentioned in this paper. Recently (Oct. 1881) another child has been born, and is up to the present apparently healthy. Little is known about the subsequent history of wet-nurse No. 1. Our search after her has only elicited that her child died, and she herself has left the neighbourhood.

The foregoing cases appear to be of interest not only from the mode of inoculation, instances of which have previously been recorded, but from the number of the sufferers. It is unfortunate that we have been unable to trace the wet-nurse No. 1, not, as must be evident, that she could have been the originator of the infection in our cases; but it would have been interesting to have ascertained if she too had suffered in like manner to A. K—— and M. D——. Her infant, we certainly learnt, had died, but this may have resulted from inoculation or otherwise. The prime source of the infection appears to be clear. The disease was undoubtedly manifest in Mrs. X——'s baby when A. K—— went to suckle it, and the appearance of a distinct specific rash not later than a week after the wet-nurse No. 1 first suckled the child precludes the possibility of her having inoculated the baby and consequently the others referred to in this paper. On the other hand, the condition of Mrs. X——'s baby was more that of congenital syphilis, to which the evidence of the maternal history of premature births &c. affords support, and would indicate the suckling baby as the innocent cause of infecting A. K——, her child, and its subsequent death, and through this latter of inoculating M. D——. It will have been observed that A. K—— for one night suckled her own child and her employer's baby at one breast, and this fact, of course, renders it doubtful whether A. K——'s baby was infected direct from Mrs. X——'s infant, or from its own mother.

NOTES OF TWO CASES OF EMPYEMA.

BY F. A. GRAY, L.R.C.P. LOND.

As there still appears to be some difference of opinion among professional men as to the best methods of treating empyema I record the notes of two cases treated in the Ottery St. Mary Cottage Hospital.

CASE 1.—F. B——, aged four, was admitted on Oct. 31st, 1880. The little patient had been ill seven weeks, complaining of pain in the left side. Latterly the breathing had been getting very short. The mother of the child said that she had noticed the left side getting larger.

On admission the patient was greatly emaciated, had a hectic flush on the cheeks, with very anxious expression; the breathing was very quick and shallow; pulse 130. The little patient could lie only on the left side, which was enlarged, the intercostal spaces bulging. There was dulness all over, motionless, and breath-sounds *nil*, the heart beating on the right side of the sternum about an inch. The symptoms being very urgent I at once aspirated the chest, drawing off the large amount of thirty-nine ounces of purulent fluid, which afforded great relief to the breathing.

Nov. 1st: The child slept well, took nourishment, and generally improved. Temperature 101°; pulse 120; respiration 26. After a few days the child did not seem so well; the cough was troublesome, and the breathing getting more oppressed. On the 6th the fluid had evidently reaccumulated to a considerable extent, when the chest was again aspirated, and eighteen ounces of pus were withdrawn, with the result of relieving the child. On the 12th the child was nearly as bad as at first, and there was evidence of a large quantity of fluid in the left pleura. I now made a free incision between the eighth and ninth ribs, below the angle of the scapula, and introduced a drainage-tube; about a pint of pus was evacuated, again affording great relief, the cavity being washed out with weak solution of Condy's fluid. From this time the temperature became normal, and continued so, except once or twice when the tube was blocked. The child rapidly gained flesh, and improved generally in health; the discharge, which at first was considerable, gradually diminished, the left side retracting, till March 1st, when there was still a little discharge, which appeared to be kept up by the presence of the tube. I therefore removed the drainage-tube, and for a few days introduced a gum catheter daily, with the result for a day or two of evacuating a small quantity of sero-purulent fluid, when it ceased altogether. The wound was allowed to close, the left side being now much contracted.

On March 10th the child was discharged. A week or two afterwards the left side of the chest had risen, and there was no appreciable difference in the two sides. The left lung was working well, and the child was looking strong and well.

CASE 2.—G. T——, aged one year, was admitted on Feb. 3rd, 1881. Had been ill three or four weeks, gradually getting thinner; the child had a bad cough, and great difficulty of breathing.

On admission all the signs of considerable pleuritic effusion were present, as in Case 1, though not to so great an extent. On Feb. 3rd the chest was aspirated, and ten ounces of pus were drawn off, the child being considerably relieved at once, and for a few days appeared better; then the symptoms began to get urgent. On the 10th the chest was again aspirated, with the same result as before. On the 12th fluid was evidently reaccumulating fast, so I made an incision between the eighth and ninth ribs, below the angle of the scapula, and introduced a drainage-tube; the cavity was washed out with weak Condy's fluid. The discharge, which was about half an ounce daily at first, rapidly decreasing. On the 16th the drainage-tube was removed, and a gum catheter passed for a few days, when all discharge ceased. The child had greatly improved in health and gained flesh. The temperature, which before was raised, now became normal, and remained so after the operation. The right side of the chest retracted considerably. The child was discharged on the 28th. The right side had expanded to its normal condition, and respiratory sounds were normal. The child seemed in perfect health.

Remarks.—Judging from these and several cases which have come under my observation, I think that aspiration, even repeated several times, is rarely sufficient to effect a cure. In both these cases it will be seen the position selected for incision was below the angle of the scapula, between the eighth and ninth ribs. The drainage was complete without any second opening. It is a point of some practical importance, I think, to substitute after a certain time (which, of course, must vary with each case) the daily passage of a catheter or cannula for the drainage-tube, since it seems to me that the presence of the tube in the cavity keeps up a certain amount of discharge, which quickly diminishes and soon altogether ceases when it is removed.

Ottery St. Mary.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tam alioram tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. GEORGE'S HOSPITAL.

COMPLETE DISLOCATION OF THE SIXTH FROM THE SEVENTH CERVICAL VERTEBRA, WITHOUT FRACTURE; NECROPSY; REMARKS.

(Under the care of Dr. WHIPHAM.)

MARGARET D——, aged forty-six, a laundress, was admitted on Dec. 26th, 1881. The patient could give no clear account of herself, and no history of any disease was obtained. It appeared from the story told by her friends, who took her to the hospital, that she, in company with her fellow-lodgers, had been drinking freely the whole of the day before Christmas, and that most of them were helplessly drunk. Two of them, who were less intoxicated than the rest, heard the woman fall downstairs in the evening, but they were unable to say at what hour. Some time afterwards a man who had been in her company found her unconscious and speechless on the staircase, but as he considered

her to be under the influence of drink he left her lying as she was, and rejoined his companions. She remained there during the night of December 24th. Next morning two of the drinkers, who had partially recovered themselves, carried her to her bedroom and placed her on a chair. Festivities were again resumed, and no one in the house was in a fit state to look after the woman until the morning of the 26th. She was then speechless and unable to recognise anybody; she would take only liquids, and was given only brandy-and-water. A medical man was sent for, who ordered her to be removed at once to the hospital.

On admission she was evidently very ill, and she was found to be suffering from paraplegia. A superficial examination by the house-surgeon was all that could be attempted in her condition at the time, and as he could detect no injury to the spinal column she was sent into the medical wards. It was then found that she had no power to stand; in fact she was unable to move her legs. The arms were constantly flexed, but she could move them slightly. No fæces or urine was known to have been passed. She was raised to the sitting posture without apparent discomfort, which may be accounted for by the fact that she was not fully conscious when she first came under observation; she confessed, however, to feeling slight pain on pressure over the cervical vertebræ. She could move her head without difficulty. She was unable to answer questions, apparently because she did not understand their meaning, but she muttered frequently the words "Back of neck." Her pulse was scarcely perceptible, and she was cold. Respiration was easily performed.

At the time of Dr. Whipham's visit on December 27th she had recovered her senses perfectly, and showed considerable acuteness in parrying questions as to her having been drunk on the 24th. Eventually she owned to have taken "a glass" of brandy-and-water. She was in no pain. Her legs were completely paralysed and were without sensation. Her arms were flexed and there was considerable resistance to full extension of the elbows. Sensation was completely abolished over the abdomen, but she had feeling in the arms, neck, and head, and she gave indistinct signs of sensation over the upper part of the thorax. There was no facial paralysis; control of the sphincters was lost. She complained of a little pain in the neck, and Dr. Whipham remarked at the time that it appeared to be a case of fractured spine, and about the first or second dorsal vertebra. The urine had a specific gravity of 1015, and contained a little albumen. No fresh symptoms were observed. The patient gradually sank, and died thirty hours after admission.

The treatment consisted of a mercurial purge. Four ounces of brandy and as much strong beef-tea and milk as the patient could drink were given. She was ordered to lie perfectly quiet on her back.

At the examination of the body, thirty-six hours after death, the height was five feet one inch; the body spare. The lungs were congested. The heart weighed nine ounces, was semi-contracted; both muscular tissue and valves were natural. The liver weighed forty-eight ounces, was of a uniform yellow colour, and soft. The spleen was natural. The kidneys weighed eight ounces, were pale, with smooth surfaces, although the cortical parts were somewhat diminished, and the capsules were slightly adherent. The brain weighed forty-eight ounces; the ventricles contained a little fluid; the organ was otherwise natural. Spinal column: The ligaments connecting the sixth and seventh cervical vertebræ, as well as the muscles in the neighbourhood, were all completely torn through; the result being that there was complete dislocation of the one vertebra from the other. The intervertebral cartilage was much crushed, and remained attached to the upper part of the two vertebræ only. After careful inspection, no fracture of either bone could be found. The soft tissues around the seat of injury were infiltrated with blood and softened. The dura mater of the spinal cord was covered with a thin layer of blood as far down as the mid-dorsal region; and at the seat of the dislocation was a thicker blood-clot. The cord itself was bruised, softened, and completely disorganised between the above-named vertebræ. There was no hæmorrhage beneath the theca vertebralis.

Remarks by Dr. WHIPHAM.—Complete dislocation of one vertebra from another without any fracture of bone is, comparatively speaking, a rare accident. There are in the museum of St. George's Hospital three preparations illustrating this injury:—1st. Complete separation of the fifth and sixth cervical vertebræ, the ligaments having been torn and the inter-articular disc lacerated. The patient was a man aged thirty-three, who fell headforemost from a height of fourteen feet. He was admitted on Sept. 26th, 1853, and died on the following Sept. 28th. 2nd. Dislocation of the fifth and sixth cervical vertebræ, the articular surfaces being only partially displaced. In this case the man, aged twenty-four, fell twenty feet from a loft; the body was bent backwards when he reached the ground. He was admitted on Jan. 23rd, 1842, and died on Jan. 28th. 3rd. Dislocation of the sixth dorsal vertebra backwards from the one above it. The specimen was removed from a boy aged eleven, who fell a distance of twenty-five feet. He was admitted on Oct. 13th, 1866, and sank, exhausted by bedsores, on Nov. 13th, following. In the records of these cases no mention is made as to the physique of the patient, and it will be noticed that in all three the accident occurred in young persons, one a child. The patient in the case now recorded, though by no means advanced in years, was probably from dissipation, prematurely old, and unhealthy in appearance. It seems likely that, in a person thus debilitated, rupture of the various ligaments connecting the vertebra should occur more readily than in one in good health. The woman was, moreover, at the time of the accident in a state of helpless intoxication from alcohol; her muscles were completely relaxed, and the strain was borne entirely by the ligaments uniting the vertebræ. The muscles attached to the spinal column of a strong and healthy person, not unconscious, who should fall downstairs, would, owing to the natural tendency to self-preservation, be thrown into strong contraction. This muscular contraction would necessarily relieve the strain on the ligaments, which, thus supported, would presumably be strong enough to prevent any displacement of the vertebræ. The weight of the body, however, coming suddenly into contact with any solid and fixed structure, as in falling down a staircase headlong, might easily produce fracture of one or more of the processes of the vertebræ—a by no means uncommon accident—whereas dislocation without fracture is a comparatively rare one.

YORK COUNTY HOSPITAL.

CASE OF OVARIOTOMY.

(Under the care of Mr. JALLAND.)

FOR the notes of the following case we are indebted to Mr. A. Jefferson, house-surgeon.

M. W——, aged forty, was admitted on Aug. 8th, 1881. The patient, who was an umbrella mender, was rather emaciated, and presented a very weather-beaten aspect. Until a fortnight before her admission she had been following her ordinary occupation, which necessitated a tramp of ten or twelve miles a day. Previous to her present illness, which commenced eighteen months before she came to the hospital, she had always been strong and well. When eighteen years old she had her first child, and another was born about a year after, since which there was no other child nor any miscarriage. She stated that eighteen months ago she thought she was suffering from dropsy, as her abdomen began to swell; at the same time she began to experience pains in her back and left side, the former being worse. Since this time she gradually increased in size, especially during the last three months; the pain also, during this latter period, increased very much, and she became emaciated, being once a very stout woman. When admitted she was suffering from pain all over her abdomen, and a feeling as though she was "going to burst;" she was very weak and very short of breath; she had no rectal or bladder mischief, neither was there any œdema of her legs. The abdomen presented all the usual appearances of an ovarian cyst, and by percussion, and examination per vaginam, it became evident that the patient was suffering from an ovarian tumour, and that this tumour consisted of many cysts, and was connected with the left ovary. Concerning this latter it may be mentioned that the measurement from the *right* anterior superior spine to the umbilicus was greater by four inches than the like measurement on the left side, but that the area of dulness on percussion pointed strongly to the tumour arising from the left ovary. The girth round the umbilicus was forty inches.

On August 16th ovariotomy was performed by Mr. Jalland;

the operation was conducted in a room belonging to the female medical ward, and one of the small wards on the medical side was thoroughly disinfected by sulphur and the spray, and in this the after-treatment of the case was carried out. The operation was conducted on Listerian principles, the spray used being 1 in 80 carbolic, and the dressings consisting, in addition to the usual layer of gauze, of a pad of teased out salicylic silk interposed between the first and second gauze layers. The instruments were all dipped in a 1 in 40 solution of carbolic acid, and ligatures of Chinese silk were prepared by maceration in a strong solution of carbolic, and afterwards boiled for a short time in the same. The patient having been put under ether the usual abdominal incision was made under the spray, all bleeding points being at once seized and tied with catgut. On reaching the tumour it was seized and pulled forwards with two Spencer Wells' forceps and then tapped; the fluid was of a dark-brown colour, and the cyst tapped soon emptied; by traction on the forceps this collapsed cyst was pulled well out of the abdomen, and the forceps were so held that no more fluid could escape out of it; another cyst now came to the front; this was seized and tapped like the first. As soon as this collapsed, it was drawn well out of the abdomen, and Mr. Jalland then by a few manipulations managed to turn out the whole tumour, there being no adhesions found except near the pedicle. The pedicle was now transfixed in two places, and tied with the silk; there were thus three loops formed in the ligature, each passing through the neighbouring loop, forming a chain. Previous to this two or three adhesions close to the pedicle were tied and divided. There were very few bleeding points; these were seized and tied, and the abdomen was sponged out. Finally the incision was brought together with thick catgut ligatures (No. 4). The whole operation occupied forty-five minutes. The patient suffered somewhat from shock, her temperature falling to 95·6°. She was placed on a water bed in the small ward, hot-water bottles were applied, and by the evening reaction had set in, her temperature rising to 101·6°. She had not vomited. The patient was kept on a milk diet, the catheter being used every four hours, and suppositories of half a grain of morphia four times in the twenty-four hours.

On the day after the operation her temperature rose to 103·6°. She had no abdominal tenderness, but there was a short spasmodic cough, which troubled her. On the second day the temperature was 103°; this was taken at 2 A.M. In the evening it had fallen to 100·4°, and it never again rose so high. On the third day, the highest temperature was 99·6°. On the 4th, the temperature rose to 100·4°. She still had the short cough, and in addition complained of rectal pains, which, on examination, proved to be due to accumulation of fæces. An olive-oil enema effectually removed this, and the pain and uneasiness ceased. On the fifth day her temperature was 99·2°, and for the rest of the time it never again rose higher than 98·2°. On the ninth day after the operation, the wound was dressed for the first time, under the spray. Union had not occurred by first intention, but the deeper parts had healed. There was very little pus on the dressing; the catgut ligatures were lying loose, their deeper parts absorbed. A fresh antiseptic dressing was applied, strips of antiseptic strapping being used to bring the united skin together. This dressing was taken off at the end of seven days, when a thin superficial ulcerated line was only found; there was no sight of the silk ligature, and the abdominal wound was healed through its whole length. Simple strapping was now applied; the patient progressed well, and four weeks after the operation she was allowed to get up; three weeks after she left the hospital, and about a month after this she called to say that she had returned to work, and had walked eleven miles the previous day.

The tumour, on examination, proved to be a cystic one of the left ovary, the amount of fluid in it was 240 oz., and the weight of the solid portion five pounds and a half.

BRISTOL EYE HOSPITAL.—The seventy-first annual meeting of the subscribers of this hospital was held on March 22nd. The report stated that 2781 patients had been treated during the past year. The new rule, in accordance with which subscribers are now allowed to recommend in-patients from any locality, appears to have worked satisfactorily.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

The Presence of Bile in the Saliva, and on the Variation of Sulphocyanide of Potassium in the Saliva in different Diseases.—Incision of a Stricture of Descending Colon.

A MEETING of this Society was held on March 28th, John Marshall, F.R.S., President, in the chair. It was announced from the chair that the address to the Queen voted at the last meeting of the Council had been forwarded to the Secretary of State, who had acknowledged it, stating that it would be presented to Her Majesty in due course.

A paper was read on the Presence of Bile in the Saliva, and on the Variation in the amount of Sulphocyanide of Potassium in the Saliva of persons affected with different Diseases, by Dr. S. FENWICK. It is believed that in cases of jaundice the saliva does not contain the colouring matter of the bile. The author has found a yellow colouring matter in the saliva of every case he has examined, after evaporating it by means of a gentle heat. A bitter taste is often complained of by patients affected with jaundice, and it has been suggested that it might result from the presence of the biliary acids in the saliva. The author has not been able to prove whether this opinion is correct or not, but he details a case in which an intense bitterness was complained of by a person unaffected with jaundice, in whose saliva he found traces of the biliary salts by the ordinary tests. Having proved that both the colouring matter and the salts of the bile occasionally presented themselves in the saliva, an attempt was made to ascertain whether the amount of the sulphocyanide of potassium, usually present in the saliva, varied in different diseases, and whether such variations coexisted with any particular diseases. For this purpose, the saliva was examined in a large number of patients treated in private and hospital practice, and the results were afterwards analysed. As it had been stated by some physiologists that the sulphocyanide was only the result of decomposition, set up in the saliva by decayed teeth, and by others that it was produced by tobacco smoking, these two conjectures were first examined. The state of the teeth was carefully remarked in 87 hospital patients, and it was found that there was no relation between the amount of decay in them and the quantity of the sulphocyanide in their saliva. The habits of 213 persons were inquired into respecting their use of tobacco, and it was found that the amount of the sulphocyanide was not affected by the habit of smoking. The quantity of sulphocyanide was almost always deficient in cases of jaundice arising from obstruction; thus of 23 cases it was very deficient in 18, and in some scarcely a trace could be found. From this the author conjectures that the amount of this salt in the saliva depends on the quantity of bile that reaches the intestines; a conclusion that seemed to be supported by two cases of hepatic fistula, in both of which it was deficient. Where jaundice was absent, one of the chief circumstances that appeared to regulate the amount of the sulphocyanide was the quantity of food taken by the patient; it was always deficient in œsophageal stricture and in cancer of the stomach. Persistent vomiting, diarrhœa, and dysentery produced a similar result, probably by removing the food before it could be fully digested. It was also deficient in cases of severe atonic dyspepsia, and in all cases of chronic disease where the appetite was very bad. The sulphocyanide was found to be in excess in fat persons and in those who were gaining flesh; deficient in those who were thin or rapidly losing weight. It was greatly in excess in all cases of acute rheumatism (thirty cases examined), and reached the maximum in the second week of the disease. It was also in excess in all cases of acute gout, and in most of the persons liable to what are termed "bilious headaches." In the early stages of all inflammatory disorders there was an excess, for instance, in gastric catarrh, in acute pleurisy, erysipelas, diseased kidneys, and in phthisis; but it sank below the average in the later stages of these diseases. The author points out that the fibrin of the blood has been found to be in excess in most of the above diseases, such as acute rheumatism, gout, erysipelas, and acute inflammations, and he suggests that an unusual amount of the sulphocyanide in the saliva is perhaps the consequence of an excessive excretion of unoxidised sulphur, resulting from the large amount

of albuminous material of the blood that has been altered by the inflammatory process, and thereby rendered unfit for organisation into healthy tissue.—The PRESIDENT remarked upon the interest of the investigation physiologically in the association of sulphocyanide in the saliva in relation to bile in the intestine, and also from the clinical significance attached to the amount of the salt in the saliva.—Dr. MARCET said the matter was quite novel, so little being known of sulphocyanide in the saliva. It was a pity that the substance had not been separated as yet, its existence being inferred from the iron reaction, with which the clinician must be satisfied. The method of colour-testing is good as far as it goes, but not scientifically accurate; but in view of the multitude of observations made by Dr. Fenwick the results were a distinct gain. He inferred from these researches that the sulphocyanide was essential to digestion; but the precise use of it is not known: it may be an excretion; and as it occurs in such minute quantities, it is difficult to see what its use is.—Dr. FENWICK, in reply, said that he did not know that the sulphocyanide had any effect on digestion. It would be very difficult to apply any volumetrical test, and therefore he was obliged to fall back on colour-tests, which enabled him to investigate a very large number of cases. Finding that no sulphocyanide occurred in cases of jaundice and in advanced phthisis, he had to modify hypotheses earlier framed; and he hoped the younger Fellows would follow up these and similar inquiries on the physiological side of pathology. Hitherto he had found discordant results in diseases of the liver; and as to the effect of remedies, as a general rule aperients, &c., diminished the sulphocyanide, whilst cod-liver oil, iron, &c., increased it. In testing for bile-colouring matter in saliva it is best to add alcohol, filter, and gently evaporate.

The next paper read was upon a case of Excision of a Stricture of the Descending Colon, through an Incision made for a Left Lumbar Colotomy, with remarks, by Mr. THOMAS BRYANT. This was a case of stricture of the descending colon, in which he excised the diseased segment of bowel through the wound made for a left lumbar colotomy, the patient recovering. The operation was performed on a lady aged fifty, who had suffered from complete obstruction for eight weeks, and was very feeble. The stricture could not be felt from below. The bowel was removed through the oblique incision made for left lumbar colotomy, by simply pulling the segment strictured through the wound and stitching each portion of the bowel with its two orifices as divided to the lips of the wound. The stricture was of the annular kind, and involved about one inch of the bowel. It was so narrow as barely to admit the passage of a No. 8 catheter. The preparation was exhibited with microscopical appearances of the growth in section as made by Dr. Goodhart. Mr. Bryant said he believed the operation he had performed was a new one, and that it was applicable to not a few of the cases of stricture of the descending colon. It had suggested itself to his mind from seeing cases of localised or annular stricture of the bowel which were free and movable, both in operations of colotomy as well as in the post-mortem room; but the case read was the first in which he had put the suggestion into practice. He pointed out how these annular strictures were generally local diseases, and, consequently, how desirable it was that they should be removed where possible. He suggested that the question of excision of the diseased growth should be entertained as soon as the diagnosis of the case was made, and that to every case of colotomy for chronic obstruction of the descending colon the possibility of being able to remove the diseased bowel by operation should be considered before the bowel is opened for a colotomy operation. He then showed how desirable it was that the question of excision or of colotomy should not be postponed till the patient's powers were too feeble to bear either, as is now too often the case. He did not regard the operation he had performed as more serious than a colotomy in which the peritoneum was wounded.—The PRESIDENT remarked on the interest and importance of the paper, and the distinction from other cases where portions of the bowel have been removed, and the segments reunited. Mr. Bryant's operation was less formidable, but fully effectual in affording relief.—Mr. G. POLLOCK thought the case redounded very much to the author's credit. He was not aware of a similar case, and believed it to be the first in British surgery. Two or three years ago he (Mr. Pollock) considered this operation should be performed, and discussed it with his colleagues. In a case in which he had performed left colotomy he got below the stricture, which could be felt above, but it was too bound down by adhesions for removal. A right colotomy was therefore done, and death ultimately took place; the long continuance of distension had produced a cracking of the peritoneal coat, a result he had often seen and one which could be obtained experimentally. In one case of stricture of the sigmoid, one like Mr. Bryant's, the patient survived colotomy two years and ten months, when he died from fatty degeneration of the heart, and post mortem the disease was found to have very little extended, only a coil of small intestine had just become adherent to it. In this case he believed the removal of the stricture might have much prolonged life, had the cardiac conditions not been present. Mr. Pollock was sure that he had seen cases in which this operation might have been performed.—Mr. CRIPPS had often thought of the same thing before, and so far as he knew, Mr. Bryant was the first to do it in this country, although last year it had been done in Germany, and Billroth acted on the same principle in excising pyloric stricture. All these strictures commence as a deposit of adenoid growth in the submucous tissue. After a while ulceration and cell proliferation occur and a constriction takes place, and the disposition of the muscular fibres determines the annular form of the stricture. The malignancy of the disease lay not so much in the growth itself as in the locality attacked, and if removed there may be no recurrence. He suggested that in sigmoid strictures an incision should be made external to the rectus muscle, so as to expose the diseased part more fully than is possible in the confined space in the loin. In either case the peritoneum would have to be opened. The objection to re-uniting the divided bowel would be the risk of fæcal extravasation.—Mr. H. MARSH mentioned the case of a woman fifty-four years of age suddenly seized with symptoms of acute intestinal obstruction, so that the diagnosis of a constricting band was made. The abdomen was carefully opened in the middle line, when the cause was found to be an annular stricture in the upper part of the sigmoid. The uncertainty of being able to remove the disease by lumbar incision is very great, and therefore knowing how limited the diseased condition in these cases is, the better course would be to open the abdomen, as Mr. Cripps had mentioned, which would probably give more successful results than Mr. Bryant's plan. He followed Mr. Pollock in urging early operations, for if the intestine be allowed to get over-distended the operation was certain to fail.—Mr. H. MORRIS quite agreed with Mr. Marsh and Mr. Cripps, that if the operation is to be introduced for all forms of stricture abdominal section was preferable, but in such cases as Mr. Bryant's the colotomy incision was better, for it requires only one incision into the peritoneum, and the distended bowel adds greatly to the risk of fæcal extravasation. In a case in which he removed a large part of bowel for intussusception, he was obliged to stitch the two ends together on one aspect, and to make an artificial anus in the front of the abdominal wall.—Mr. BRYANT, in reply, said that he felt it best to adhere to the lumbar incision, the oblique one he published admitting of more space than the ordinary colotomy wound. Thus at least four or five inches of the descending colon can be dealt with in the dead subject, and more than that in the living. It must also be borne in mind that nine-tenths of the strictures are in the descending colon and the rectum; and of the former the majority involve the sigmoid and splenic flexures. If the part is movable, it can be excised; the operation is not possible when there are adhesions, and that would be an objection to opening the abdomen in front. The question should be excision, if practicable; colotomy where excision is not feasible.

CLINICAL SOCIETY OF LONDON.

Excision of the Spleen.—Nephrectomy for Tuberculous Pyelitis.

THE ordinary meeting of this Society was held on Friday, March 24th, J. Lister, Esq., F.R.S., President, in the chair. The cases related were of considerable interest, and raised discussions on the important subjects of splenectomy and nephrectomy, and the cases in which the operations are justifiable; the discussion on the latter subject will be continued at the next meeting. The following living specimens were also shown: two cases of sponge-grafting, by Mr. C. Macnamara; case of carbuncle of the lip, by Mr. Clutton;

and a case of spina bifida cured by injection of iodine, by Mr. A. Pearce Gould.

Mr. WARRINGTON HAWARD related a case of Splenectomy. The patient, a woman aged forty-nine, had usually enjoyed good health, and had never suffered from ague or any intermittent fever. The catamenia had ceased three years. She had been married seven years, but had not had children. For eighteen months she had suffered pain in the left side of the abdomen, and for ten months had been aware of the presence of an abdominal tumour, which had been steadily increasing in size, and which caused her distress only by its weight. When admitted into St. George's Hospital she was a rather stout woman of good complexion, not looking at all anæmic: and although the number of the white globules of the blood was increased, she showed no other sign of leucocythæmia excepting a greatly enlarged spleen. The spleen occupied the greater part of the left side of the abdomen, and extended from the loin to three inches beyond the middle line in front, and from the ribs to the groin. The tumour was firm, well defined, and moderately movable; it produced great discomfort from its weight, and a dragging sensation whenever she moved about. There was no other glandular enlargement, and the rest of the viscera were healthy. She had no palpitation nor dyspnœa, nor had she suffered from hæmorrhage. The temperature, pulse, and respiration were natural, and the urine was normal. It was decided to remove the spleen, and for this purpose Mr. Haward made an incision in the middle line of the abdominal wall, extending from two inches below the xiphoid cartilage to within two inches of the pubes. The enlarged spleen at once presented, and was found free from adhesions. In endeavouring to tilt up the lower end of the tumour a rent occurred at its upper margin from which free hæmorrhage took place for a moment, but the bleeding was speedily arrested by the pressure of a sponge upon the torn part. The vessels at the hilus were enormously enlarged; they were clamped and ligatured, after which those of the gastro-splenic omentum were secured by passing an aneurism needle threaded with silk through the membrane, and tying it in several separate portions. The connexions of the spleen were then severed, and the organ removed without further difficulty. Carbolised silk was used for the ligatures, and the only hæmorrhage of any consequence was that which occurred from the rent in the spleen. While the wound was being closed the patient suddenly became profoundly collapsed, but was revived by artificial respiration and the subcutaneous injection of ether. Five hours after the operation vomiting commenced, and persisting with great frequency, rapidly exhausted the patient, who died in the evening of the day of the operation. The spleen presented the appearances of simple hypertrophy both to the naked eye and microscope. At the autopsy no disease of any organ other than the spleen was discovered. There had not been any bleeding after the closure of the wound, but the abdomen contained a little thin blood-stained fluid. With the exception of slight ecchymosis in the immediate neighbourhood of the wound, the peritoneum and abdominal viscera showed no sign of injury. The indications for and against the operation were considered, and it was pointed out that although there was an increase in the white corpuscles of the blood, the patient did not show any of the other signs of leucocythæmia excepting the large spleen. There was no sign of anæmia or tendency to hæmorrhage, and, indeed, the condition of the blood would not have been suspected except on microscopical examination. The fatal result was not caused by hæmorrhage, which is the chief danger in such cases, but seemed to be due rather to the severe disturbance of the great sympathetic plexuses and the consequent shock and vomiting. The paper concluded with some remarks upon the method of operating.—Dr. STEPHEN MACKENZIE was very glad that this opportunity of discussing the propriety of removing the spleen in leucocythæmia had arisen. The results of removal of the spleen hitherto had been most unfavourable. He recently had a young man sent to him with an enlarged spleen, whose blood contained one white to seven or eight red corpuscles, there was anæmia, and œdema. He was unable to hold out any hope of recovery or cure from medicinal treatment, and when the question of operation was proposed, the man accepted its risk with the chance of cure. He was for this admitted into the London Hospital under the care of Mr. Reeves; he was put under treatment by iron and good food; his condition improved; the white corpuscles are now one to seventeen red, and the red corpuscles 60 to 70 per cent.; the œdema less. The young man knows that the operation has never yet been successful, but he still wishes for the operation; quite recently, however, he became worse with œdema and change in the retina. As the disease left to itself certainly proves fatal, are there no cases in which operation is justifiable? If the primary cause of the disease is enlargement of the spleen, removal of the organ seems justifiable and hopeful in the very early stage.—Mr. CLEMENT LUCAS suggested that if the disease is a mere hypertrophy of the spleen, an operation which would lessen the blood-supply might do good. Ligature of the femoral artery has done good for Barbadoes leg, and ligature of the splenic artery must be far less dangerous than removal of the spleen, and it also might be useful.—Mr. REEVES said that before Mr. Collier's table appeared in THE LANCET, he had found that about one-fourth of all the cases of splenectomy had recovered. This table at first made him waver in his intention to remove the spleen in Dr. Stephen Mackenzie's case. But on analysing the cases he found those that died were old. This form of splenic disease is very common in the lower animals, and veterinary surgeons might afford great help by operating upon animals in the early stages. He had thought of ligature of the splenic artery, but feared the vasa brevia were not sufficient to nourish the organ. He thought that the mortality of the operation hitherto was possibly partly due to the late stage of the disease at the time of operation.—Dr. GOODHART said that from the side of morbid anatomy the excess of leucocytes in the blood seemed to increase the risk of operation. At post-mortem examinations the leucocythæmic blood-clots are very feeble, although the proportion of white to red corpuscles is not more than one to six. When fever arises in this disease the blood is apt to soften down, and degenerate into pus, and for these two reasons such cases were very unsuitable for such a grave operation.—Dr. MARCET had excised the spleen of a dog some years ago, without any ill effects ensuing, and some years after, when the animal died from some unconnected cause, no changes were found at the original seat of the organ.—Professor LISTER was much disappointed at the fatal result of Mr. Haward's case, especially as the danger of hæmorrhage had been successfully overcome, the death being due to shock. Had chloroform instead of ether been given, death would have been ascribed to the anæsthetic. He feared that the ligature of the splenic artery in a case of large spleen would be very difficult. It was a very good suggestion to test the effects of ligature of this artery, and also removal of the enlarged spleen in early stages, in the lower animals.—Mr. W. HAWARD had not planned the operation for the cure of leucocythæmia, but for the removal of a troublesome abdominal tumour. The examination of the blood altered the circumstances, but then he had not Mr. Collier's statistics or he should not have consented to operate. However, he regarded the absence of evidence of physiological change in the blood as of favourable omen. The death was not from hæmorrhage, although for a moment the bleeding was very free, nor was there any difficulty in arresting this hæmorrhage. Ligature of the splenic artery would be very difficult when the spleen is large. In many cases the spleen has been removed with safety in animals and man. The question to be decided is whether it is a justifiable operation in even the early stages of leucocythæmia.

Dr. GOODHART and Mr. GOLDING BIRD read notes of a case of Nephrectomy for Scrofulous Kidney. The patient was a man who had suffered from symptoms of renal affection for fifteen months prior to his first coming under observation. His emaciated state and generally cachectic condition, combined with the pyuria and the right lumbar pain from which he suffered, pointed at once to a scrofulous pyelitis on the right side. All the other viscera were healthy. Combined abdominal and lumbar palpation on the right side proved the presence of an elastic tumour in the site of the kidney. It was tender, and was found on carefully watching it that it varied in size inversely as the bulk of the pus found in the urine. After due consideration it was agreed upon by the authors that active steps should be taken to afford relief; their reasons were founded upon the almost universal tendency of these cases rapidly to go to the bad, the proved inefficacy of medicines to arrest the progress of the disease, the fact that the disease at least at first is local, and that it is only later on that other organs become infected and diseased. It was further agreed that in the patient's then condition anything palliative, even in the way of tapping the swelling, would be but loss of time and making demands on his strength to no purpose. Ne-

phrectomy was therefore performed; the whole of the kidney was removed, after tapping it, in order to first diminish its bulk, through a vertical lumbar incision. It weighed ten ounces, and was a characteristic specimen of a scrofulous kidney. Soon after the operation extreme collapse supervened, from which the patient never rallied. At the inspection the right urinary organs and the bladder were the only parts diseased, the latter, however, not irrecoverably so. While the gravity of the operation alone might account for the death, yet it was noticed that the pulse did not fail during the operation, either on the necessary manipulation of the adrenal nor at the ligature of the pedicle. The collapse supervened at once on returning the patient to bed, and the possibility of the carbolic acid of the spray being absorbed by so large a raw surface, and in such close proximity to the large lymphatic sac or peritoneal cavity, was suggested in explanation of the fatal ending of the case. At the operation it was found impossible to free the upper end of the kidney until a portion of the twelfth rib was excised; this was done subperiosteally, and it was afterwards found that the pleura was not in any way injured by this procedure.—Mr. CLEMENT LUCAS said that the incision used by Mr. Golding Bird was that which he had himself employed; and he thought it gave most room. He considered the point raised by Dr. Goodhart and Mr. Golding Bird, as to the advantage of preliminary nephrotomy, was a good one. In his own case, the patient had the kidney cut into six years before the organ was removed. In that case he tied the ureter before and independently from the vessels; the ureter was very much thickened. In Mr. Golding Bird's operation, which he witnessed, the excision of the rib certainly appeared necessary. The patient had an injection of morphia after the operation; and it was worthy of discussion how far these patients can bear morphia. In two cases he had seen patients die from the combined effect of the operation, chloroform, and morphia; and now he never gave an opiate until the effects of the chloroform had quite passed off. His own patient is at the present time in good health.—Mr. RICKMAN GODLEE thought there was great risk of wounding the pleura in excising the last rib; for the pleura descends as far as the ligamentum arcuatum externum, which is a good deal below the vertebral end of the last rib. In this case the prostate was also tuberculous; and probably that could have been detected if searched for. He thought it unwise to operate for strumous kidney unless the entire disease could be removed. —Mr. MORRANT BAKER referred to his own case of nephrectomy, in which he first cut down on to the kidney and put in a drain and tried to get the organ to shrink. But so far as he could judge that operation did very little good; for there was almost the same amount of pus in the urine as before. The nephrectomy was made much more difficult by the nephrotomy, as the parts round the kidney were so matted together. He saw the child lately when attacked with some fever; she died, but not directly from any effects of the operation, although the want of one kidney may have made her less able to withstand the poison of her febrile attack. The urine when last seen was quite healthy. He would be glad to know if the President considered the exposure of such a wound as is made in this operation for a long time to the carbolic acid spray was attended with danger of carbolic poisoning.—Mr. THOS. SMITH said it was very rare to find strumous disease limited to one kidney. Among the large number of specimens of strumous pyelitis in young children he had seen, he had never in a fatal case met with the disease in the kidney without affection of the ureter or prostate, probably the other kidney and possibly also the urethra. And if the surgeon waits till his interference is required he probably has waited too long, and his operation will be too late to remove the whole disease.—Mr. KNOWSLEY THORNTON had recently had under his care a case like Mr. Golding Bird's. He was induced to try nephrotomy first, and he opened the kidney six weeks ago, and evacuated putrid pus. The temperature rose very high for the first few days, but the woman improved for two or three weeks, and during that time he was able to estimate the condition of the other kidney, for the urine was quite normal. He had three times opened the kidney from the loin, once removed it through a median abdominal incision, and twice through Langenbuch's incision through the belly on the outer side of the rectus, and he had found that by this incision the hæmorrhage was less, that the kidney was easily exposed, and the vessels at once laid bare and easily ligatured. Previous nephrotomy no doubt adds greatly to the difficulty of nephrectomy. He rendered his sinus aseptic by injection of iodine. In his last case the ureter was thickened all down to the bladder, and as it seemed to be dangerous to leave the end of the ureter in the belly he clamped it, and brought it out at his incision. He surrounded the stump with strong iodine, but as soon as its end became a slough it became putrid, evidently from some infection from within. A previous loin-wound is very convenient for purposes of drainage; but, on the whole, he thought it gave the patient a much better chance to do nephrectomy at once, and through Langenbuch's incision; he had performed more than two hundred operations upon the abdominal cavity, some lasting from one to three hours and a half, without having seen any ill results from the carbolic spray. —Mr. CLEMENT LUCAS remarked that in his and some other cases the passage of pus continued for months after the removal of the kidney, and then ceased entirely.—Dr. BARLOW considered that the relative merits of nephrotomy and nephrectomy would have to be settled by experience rather than by *à priori* evidence. Not unfrequently scrofulous pyelitis may be found quite limited to one kidney. He had had a case operated on by Mr. Couper. It was a girl, aged eleven, who was passing a great quantity of pus, but the disease was considered to be limited to one kidney; that kidney was excised, and the child was now in good health. —Mr. BARKER said that in one case certainly the removal of the last rib was fatal, for the patient suddenly became cyanosed and died, apparently from collapse of the lung; but in many cases the rib can be removed without wounding the pleura. Quite recently he unintentionally removed the end of the last rib in cutting down on to the kidney, and in enlarging the wound he cut between it and the eleventh rib, and no ill result followed; in this case no doubt he might have safely removed the rib. —Mr. REEVES had twice explored the kidney from the loin, and having seen other surgeons operate, he thought it was quite possible to remove even large kidneys without excising the last rib, although possibly that was justifiable in Mr. Golding Bird's case. He had found it very useful to pull up the rib, by which means he got much more room. Quite recently he saw Dr. Heywood Smith remove a large cyst of the kidney through an abdominal wound, and he was sure that it would have been very difficult and dangerous to do it from the loin. When done through the loin, he preferred the oblique incision just above that used for colotomy.—Prof. LISTER was very much interested in hearing Mr. Thornton's description of his means to make an abdominal operation aseptic after a septic lumbar incision. He had had his first experience of renal surgery quite lately, in the case of a young lady who for six years had occasional hæmaturia, and lately had passed purulent urine. She had become much emaciated. In the uncertainty of diagnosis he made a renal exploratory incision. On puncturing the kidney pus escaped, and no stone was found; an opening was cut into the kidney and putrid pus in quantity escaped, and the finger felt several communicating cavities in the kidney. The cavity was washed out with chloride of zinc, a drain inserted, and the wound sewn up and dressed with eucalyptus gauze. The patient was so reduced that it was not thought right to proceed to nephrectomy at once. He had repeatedly found that an abdominal abscess containing very fetid pus may, if treated antiseptically, follow the same course as an aseptic abscess. Thus in a case of large lumbar abscess with pus of very putrid nature and with a fæcal odour, which was treated antiseptically, only a serous oozing was noticed after the operation. Bacteria were found in the fetid pus, but not afterwards, and it seemed as if they could only flourish in fetid pus, and perished in the flow of healthy serum. The eucalyptus gauze tries the kidneys far less than carbolic acid. His patient has done well; the appetite is good; discharge only serous, and rapidly diminishing; wound for the most part healed. So far as that case goes it is decidedly in favour of nephrotomy. For even if it be a tubercular kidney (and not simply a renal abscess), and has to be afterwards removed, the nephrotomy has given the patient her only chance of life, for it has enabled her to recover strength and condition before the more serious operation. He had never seen reason to suspect the spray as the cause of the death of the patient in any operation, however long.—Dr. GOODHART thought that scrofulous kidney is certainly local to begin with, and the disease spreads down the ureter to the bladder, and up the other ureter to the other kidney. Thus, he had recently seen an autopsy where one kidney had

been long affected, and the other only showed signs of commencing disease. It was not an objection to the operation to leave some of the diseased structures behind, as Mr. Lucas's case showed.—Mr. GOLDING BIRD was glad Mr. Lucas had reminded him of the morphia. When the man was returned to bed he became very restless, and then he gave him a quarter of a grain of morphia subcutaneously. Although the man died with small pupils, he felt sure the morphia was not the cause of death. He did not remove the whole rib, but only the middle of it, and that subperiosteally. The focus of disease in the prostate was not larger than a pea, and the other kidney was found quite healthy.

The Society then adjourned.

MEDICAL SOCIETY OF LONDON.

Extirpation of Myeloid Sarcoma and Melanotic Sarcoma without Recurrence.—Treatment of Chronic Dysentery by Enemata of Nitrate of Silver.—Atrophy of the Brain in Imbeciles.

A MEETING of this Society was held on March 20th, the chair being taken by the President, Mr. FRANCIS MASON, who exhibited a man aged sixty-eight, from whom Mr. Mason, in 1874, had removed a myeloid sarcoma of the septum nasi in three operations, the first by the polypus forceps; the second, three weeks later, by excision through the side of the nostril; and the third, three months afterwards, by reopening the former cicatrix and dividing the upper lip in the median line, and a portion of the inner surface of the lip inwardly; the growth was also excised. There had been no recurrence. Mr. Mason also mentioned a case of melanotic sarcoma of the right cheek, operated on in 1872. The submaxillary glands were so extensively involved that it was found impossible to remove all the disease. There was no recurrence of the growth, death taking place in 1880 from some other cause. — Mr. BUTLIN would not draw too sweeping conclusions from such cases, many of which gave disappointing results, varying with the site and the tissue in which the tumour occurred. Central sarcoma of the bone, like the first related, was much less malignant than periosteal sarcoma. The second case was not parallel to the first; the glandular implication showed its carcinomatous nature. Instances have been known of enlarged glands subsiding after removal of malignant disease of the tongue; in some cases the injury done by the operation may set up inflammatory processes in the glands of salutary tendency.

Dr. S. MACKENZIE read a paper on the Treatment of Chronic Dysentery by Voluminous Enemata containing nitrate of silver (the paper will be published in THE LANCET). — The PRESIDENT asked whether the author recommended washing out of the bowel before giving the enema.—Dr. CULLIMORE approved the method; he had used injections containing nitric acid. In a case treated in Burmah, of two years' standing, large injections of warm water were successful after the failure of other measures. Fried fish was of value as diet, and he had found good results from benzoin in acute dysentery.—Dr. ROGERS had found injections of charcoal and opium, with red gum given by the mouth, of great service.—Dr. DE HAVILLAND HALL asked whether the patients were urged to retain the enema. He had tried this treatment with children, but with only moderate success, and had found extract of bael and confection of bael of service.—Dr. GILBART SMITH asked how long should the enema be retained, and whether the injection of perchloride of iron, retained by means of a sponge, would not be safer? It was a plan he had found to succeed in the diarrhœa of phthisis.—Dr. MACKENZIE, in reply, said he washed out the bowel only when scybala were present; that he spoke only of chronic dysentery; that in most cases the injection is returned at once; and the after-injection of salt, as practised in two of his cases, was unnecessary. The use of a sponge might incite harmful peristalsis.

Dr. FLETCHER BEACH read a paper on Atrophy of the Brain in Imbeciles. Two forms are spoken of by writers. In the one there is incomplete development; in the other loss of nerve tissue previously present. Microcephalic imbeciles are examples of the first class. Microcephaly may be general or partial; some portions of brain may be too small or altogether absent; he had seen convolutions of certain parts much reduced in size from non-development, the remaining portion being too large or normal. The occipital lobes are often arrested in growth in microcephalic cases, and the corpus callosum may be shortened posteriorily or be absent. Usually, however, microcephaly is general, and the defect consists in the smallness of the hemispheres. In two cases related by him at the Congress last year the brains weighed 7 oz. and 20½ oz. respectively, and he had seen others since weighing 20½ oz. and 24½ oz. The cerebellum in microcephaly is relatively larger than normal, being often in the proportion of 1 to 3 or 1 to 4, instead of 1 to 8. Illustrative cases were given, and the fact that the brain tissue suffered in quality as well as quantity was pointed out, microscopical specimens showing deficiency in cell process and protoplasm. The second form of atrophy appeared in various forms; the most interesting being atrophy of one side of the brain with co-existent atrophy of the limbs on the opposite side of the body. This kind of disease seemed to be caused by chronic meningitis or inflammatory processes in the cortex before or after birth. Cases were related, the usual characteristics being thickness of the cranium, opacity and thickness of the membranes, effusion of serum into the subarachnoid space and sometimes into the ventricles, with atrophy of one hemisphere, including the corpus striatum and thalamus, and atrophy of the cerebellum and cord of the opposite side.—The PRESIDENT asked as to the influence of consanguinity, and whether in these cases the palate was arched, or the thyroid enlarged. Had the use of forceps during delivery any share in their causation?—Dr. GILBART SMITH had seen two cases of deficiency of one side of the brain, with thinning of the skull. Was pressure of the skull tried as a means of diagnosis?—Dr. S. MACKENZIE said that the practical point was the mode of causation shown by Dr. Beach to consist in inflammation of the vascular parts of the encephalon, causing atrophy of the deeper structures. The stress of the lesion falling on the hinder parts of the brain, the seats of higher faculties, which are late in attaining their full development, therefore suffer more from causes originating after birth than the earlier developed parts. — Dr. BEACH, in reply, said that only two per cent. of cases of imbecility are accounted for by cousin-marriages. Though arching of palate is found in these cases as well as in sane people, its presence may be taken to prove the congenital nature of the state. Goitre is not always an accompaniment; in some cases fatty tumours occurred in the neck with or without goitre. Open sutures are found in some cases; therefore synostosis is not the cause of the lesion. The use of the forceps was not shown by recent observation to be a cause of imbecility; a prolonged labour was more dangerous. He had not seen any cases with thinning of the skull.

THE ST. GOTHARD PARASITE IN INDIA.

To the Editor of THE LANCET.

SIR,—By this mail Professor J. F. P. McConnell informs me that he has discovered *Dochmius duodenalis* in Calcutta, and it seems that the parasite is by no means uncommon in India. Although there will be no astonishment at this announcement, yet the find adds largely to our knowledge of the geographical distribution of this injurious parasite. Professor McConnell states that the worm is by no means confined to the upper division of the small intestines; on the contrary, the majority of the specimens were removed from the mucous membrane of the jejunum. They were firmly fixed to the gut. As Professor McConnell found the parasites in a large number of post-mortems, in cases where the victims, who are natives, died of many different diseases, he does not feel justified in stating that they were the sole cause of death in any case. In many patients he admits that anæmia was the prevailing feature, but attributes this rather to dysenteric and malarial complications. His investigations supply many other interesting details, which will doubtless be published in due course.

I am, Sir, your obedient servant,

March, 1882. T. SPENCER COBBOLD.

CHARING-CROSS HOSPITAL. — The Duke of Edinburgh, President of the Charing-cross Hospital, will preside at the festival dinner in aid of the funds of the institution, to be held on April 19th at Willis's Rooms.

THE LANCET.

LONDON: SATURDAY, APRIL 1, 1882.

THE important meeting held at the College of Physicians on Tuesday last, to found an Association for the Advancement of Medicine by Research, is the outcome of two recent events—the meeting of the International Medical Congress, at which the absolute necessity of the experimental method for the advancement of medical knowledge was made so abundantly apparent; and the prosecution of Dr. FERRIER, which demonstrated the unreasoning persecution to which British experimenters are subjected. Months have elapsed since the movement then started took shape, but the time has been busily and well spent by a few earnest men, and the result is the formation of what ought to be the most important Association for the Advancement of Medicine ever founded. It is impossible to forecast the work that will be done by it, although we may form some estimate of what it may endeavour to accomplish. And when we attempt this estimate, and try to ascertain what the formation of such an Association really means, we are at once struck with the difference between it and any of the existing medical societies and associations. It does not exist for any political, social, or purely educational purposes, nor for any direct advantage of medical men themselves, but purely and simply for the advance of medicine by research. It may be asked, What can an association do to promote scientific research? The actual work of research must be done by individual workers. True, but their efforts may be stimulated, guided, or restrained by the co-operation of a body of men specially fitted to appreciate their aims and advise them in their procedure. And while the Association may be able to do much by its direct influence upon the profession, it may do more by its influence upon the public. By exaggerated statements, and fictitious appeals to an excellent sentiment, a false feeling has been excited in some quarters which renders medical research in many cases difficult, in some even impossible. A thoroughly representative association, such as this is, cannot but have great weight with the more intelligent part of the general public.

There are some features in the Association which are of specially hopeful omen. The first of these is the co-operation of men distinguished in all branches of science with workers in medicine. We are all willing enough to admit the close dependence of medical science upon other sciences, but never before has there been such a practical acknowledgment of the fact. This must tend to widen the scope of researches undertaken by, or carried out under the auspices of, the Association; and it will be a means of communication between physicians and other men of science that cannot fail to widen the interest each feels in the work of the other, and to bring to bear upon medical problems the rich stores of information gathered in other fields. It is also noteworthy that this Association is formed for the advancement of medicine *by research*, —not by research and observation, still less by observation alone. This is a distinctly new departure. It is a formal declaration that it is by research that we may now hope to advance our science. While not ignoring the fruits of observation, the formation of this Association is a practical assertion that there is a better method from which greater results are to be expected, and which must be deliberately and persistently pursued. Not less encouraging is the broad basis on which the Association is to work. It is not to be interested in one form of research only—for instance, it is not to protect vivisectors alone; but its aim is to assist and stimulate every kind of research, physical, chemical, or vital, which has any bearing upon medicine. The best evidence that much is to be hoped for from this Association is the spirit that evidently animates the leaders of the movement. There is no sign of vindictiveness, of opposition to existing laws; it is emphatically not an anti-society, and not marked by any narrow party spirit. The profession is not asked to agitate for the repeal or amendment of any law. Existing laws are to be complied with and used, and their effect upon scientific research carefully watched and exactly defined.

The work undertaken by this Association is as difficult and delicate as it is important, and we would echo every word uttered by Sir W. JENNER and Sir RISDON BENNETT on this point. The Council of the Association, upon whom all this labour will devolve, will need all the discretion which even age can bring to enable it to steer clear of the many dangers in its path. We may expect to see its first efforts devoted to the publication of carefully prepared information on the need of the experimental method, its advantages, the benefits that have already resulted from it, and the work yet awaiting it. It is no easy matter to accomplish this task in a worthy manner. But from the tone of the meeting of Tuesday last it is evident that the Council may rely upon the aid of the very best men, not only among ourselves, but in all branches of science. It is hoped that Sir JAMES PAGET will be appointed by the Council its vice-chairman, and, as this officer is by the rules of the Association eligible for re-election, it is desired to secure his services in a somewhat permanent way. If this arrangement can be carried through it will be an important step towards securing the success of the Association.

We must refer to the account contained in another column of the meeting held at the College of Physicians for the full particulars of the Association, and will now only claim for it the sympathy and co-operation of the whole body of the profession.

THE residence of H.R.H. the Duke of CONNAUGHT at Bagshot Park furnishes an additional illustration of the peculiarities which attach to British mansions as a rule, whether big or little, royal or plebeian, and the building thereof. Happily this illustration is shorn of the disastrous consequences which have too frequently accompanied previous illustrations, and of which the most melancholy example rests with the Royal Family. Designers, constructors, and proprietors, with few exceptions, hold to the traditional belief that a house is built to live in, and so long as it pleases the eye, shuts out wind and weather, and meets the convenience and comfort of the occupier, there is nothing more to be said. The conception that the house may be so constructed as to

facilitate the death of the occupier, and so promote the early closure of the life it was intended to prolong and protect, is of too recent an origin to have spread widely among, or impressed deeply, house-builders. Experience shows this, and proves how slowly the knowledge is being acquired by the persons who are most responsible for house designing and construction. The habits and trade customs of several professions and occupations have to be unlearned before the conception of the house as a means of premature death can be fully acquired and acted upon. A short time ago the house, as a combined product of the architect and the builder, alone entered our minds, and the proprietor had no higher conception of his relations to it than paying the money required on the architect's certificate. But now another view of the subject is beginning to obtain, and it has to be recognised that the hidden parts of the house require as much skill in their design as the more obvious parts of the construction, and that as things go at present these hidden things, if they are to be dealt with properly, require special skill and special training; that the architect, indeed, requires to be supplemented by the sanitary engineer, and that, in fact, the architect who is not also a sanitary engineer is not fully competent to perform his avowed work.

This time will no doubt come, but in the present transition stage from the dark era to the more enlightened age we look for, the householder is apt to be victimised by the traditional practices of the several hands into which he falls, and especially by himself, in selecting or constructing a house. Of this Bagshot Park mansion is the last glaring example. The house has no doubt lent itself admirably to the convenience and comfort of the occupiers, to the decorative painter, to the upholsterer, and generally to embellishment, but at the best it was an ingeniously contrived architectural retort, holding within its walls the most hurtful products of the effete matters apparently cast forth from it, but in reality hidden within it, and free to produce their maleficent effects everywhere within the walls. This had been partially foreseen at the time of the construction of the house, but the impression made then was not so deep as to have led to a skilled inspection of the sanitary arrangements before the Duchess entered upon residence. And this leads to our first general observations on this subject. The indifference of house proprietors and householders to this subject is astonishing. It is the rare exception, not the rule, to have the sanitary arrangements of a house, even when built at a time when these matters received little attention, examined by a skilled person, before it is occupied. Such an examination ought to be regarded as requisite for every house, small or great, unless the local authority can bear testimony to it, and, in regard to large mansions, ought to be entrusted to a qualified sanitary engineer. How frequently would an inspection of this kind furnish an escape from serious sickness, if not serious expense. House proprietors and house occupiers, by avoiding this business-like procedure, have themselves to thank most for defects in architects' designs and for the structural shortcomings of builders.

The architects, we are glad to say, are giving much greater attention now to structural matters relating to the sanitary condition of houses than formerly. The remark made by *The Times*, a short time ago, with reference to this matter, that it would not be improved until an architect was hanged for derelictions as to drainage once a year, the choice of the architect to be so dealt with to be left to his fellows, could not with propriety apply now. The observation was made *à propos* of two instances, then fresh in mind, of two splendid new schools erected in the suburbs of the metropolis, in both of which serious outbreaks of enteric fever among the scholars marked the opening of the buildings. In the one the whole system of drainage ventilated through the water-closets into the dormitories, and in the other the whole system of lavatories in the dormitories was in direct communication with the vast cesspools of the establishment.

The builders, however, are the persons to be most dreaded in house-construction—that is to say, the "practical men," practical being interpreted in the sense given to the word by the late Lord BEACONSFIELD, persons, to wit, who practise other people's errors. It is difficult to say whether the builder's prejudices or the workman's customs are most dangerous. Both contribute, unfortunately, to the same result. Drains imperfectly laid or connected, or incomplete, or work not finished, and buried out of sight of an ordinary spection, are the most common defects. We have known a gas-pipe plugged by a twist of brown paper left beneath the wall-paper in an angle of the room; a steam-escape pipe, two inches too short, buried beneath the plaster, the defective workmanship not discerned until much damage had been done for want of an outlet for the steam; a dip-trap left incomplete from the withdrawal of the "dip" slate, to the builder's advantage; builders whose highest conception of sanitary arrangements consisted in interposing S-traps in the drains wherever practicable, &c. In fact, the shortcomings of builders and their workmen in the sanitary arrangements of houses are almost inexhaustible, and such as would well-nigh drive to despair the sharpest clerk of the works.

We believe, however, in reference to "our houses," that there is a better time coming. To this the various sanitary protection associations are giving important aid, and the "model by-laws" as to new buildings issued by the Local Government Board—the most complete set of regulations in existence as to what should constitute a healthy house—are being familiarised to every sanitary authority in the kingdom. An individual must, indeed, go out of his way to be wrong, if at the present time he can escape from a competent knowledge of what goes to make a wholesome house.

WE have more than once in these columns had occasion to insist upon the importance of the localistic view of Cancer as an encouragement to the surgeon in his endeavour to cope with this dread disease, and opportunities are continually being afforded in the advances made by surgery for a reiteration of this doctrine. Pathology has enabled us to define with fair accuracy the meaning of the term "malignant." It has taught us that there are some forms of new growth, which from their position or their own disintegrating changes imperil life, yet do not infect the system; they remain localised in the vicinity of their primary seat, and if capable of complete extirpation do not recur. There are others which infect neighbouring lymphatic glands, and seem to spend all their virus on them, seldom spreading to other regions. Others, again, with pronounced malignancy,

are more or less rapidly disseminated throughout the organism. We believe that all the facts regarding malignant growths may be explained on the hypothesis of their local origin, as was some years ago so strenuously insisted upon by CAMPBELL DE MORGAN; and the differences in degree and extent of generalisation depend as much upon the nature of the primary growth as they do upon the individual organism on which it is grafted.

Taking, then, this doctrine as established, how can we explain the lamentably frequent failure of surgery to radically cure the disease? To this question pathology supplies an answer, borne out by clinical experience. Take the instance of cancer of the breast. Excision is practised; a clean sweep is made of all the implicated structures and glands, as well as some of the apparently healthy surrounding tissue. One of several events may happen. No recurrence may take place, and a radical cure may be effected; but this is only too infrequent. In many cases in which it does take place, the new growth may be found to be of a simple non-infective character. Or there may be no local recurrence of disease; but sooner or later the lymphatic glands, disregarded at the time of the primary operation, become enlarged and cancerous, and may then be either removed or be so situated as to defy removal; whilst also internal viscera or the opposite breast may be the seat of secondary growths, and death ensue from such extension within a year or two of the first extirpation. The reason why this happens is that the disease has *not* been extirpated wholly, and this through no lack of judgment or boldness on the surgeon's part. Tissues that appear healthy, even to the microscope, may conceivably be already under the mysterious influence of the *materies morbi* generated by the growth of the primary disease; and if this may seem too extravagant a statement, it is certainly true of tissues that appear normal to the unaided eye. In this way only can the facts of local recurrence and recurrence in the lymphatic glands be explained. The same applies to the visceral metastases. At the time of operating no indication at all may be given of the liver being infected, and yet how many cases of mammary cancer eventually present extensive secondary growths in this organ. How can this be explained, except on the view that, even at the time when it appeared possible, and indeed in which it really was possible, to remove the primary disease, the liver was already infected, although a long interval—in some cases measured by years rather than months—might elapse before the latent germs manifest themselves in that organ. There is no need to apply the argument to all the other seats of secondary cancer, but it is not difficult to make the application, which seems to us to be a sound deduction from the pathology of these growths.

This idea does not, of course, preclude the notion that in many individuals there may be an underlying tendency to cancer, whereby they are more liable to its excitation from comparatively trivial causes than others are: a tendency which may perhaps be explained by a local perversion of nutrition or a congenital defect of certain tissues transmissible from parent to offspring. It does not seek to explain away "constitutionalism," but aims solely at emphasising the relation between the primary source of the disease and its secondary manifestations. This, then, is the encouragement to be derived by surgery from pathology—viz., to extirpate the local disease at the very earliest moment, so as to anticipate its generalisation; to remove as much tissue as possible within the region of the primary disease, going far beyond the limits of visibly altered tissue. There is nothing new in either of these principles, which are daily enforced by practical surgeons, and yet the ultimate issue is too often the same.

There have been two papers read before our Societies this week that bear on this subject, and have, indeed, suggested the foregoing remarks. At the Royal Medical and Chirurgical Society Mr. BRYANT communicated a case in which he had successfully excised a cancerous stricture of the colon through an incision in the loin, made with the object of colotomy, symptoms of chronic obstruction having lasted a long time, and practically complete obstruction for eight weeks. The diagnosis of annular stricture in the descending colon or sigmoid was made, and confirmed when the bowel was exposed. Finding that the gut had contracted no adhesions to the surrounding parts, and knowing the very local character of these cancers of the bowel, Mr. BRYANT relieved the patient of the diseased mass, and has probably succeeded in effecting a complete cure. Colotomy alone would have done much: the obstruction would have been relieved, and the ulcerating growth, no longer irritated mechanically, would have proceeded at so slow a rate as to have given but little trouble from its local extension for a long time; but its presence will ultimately probably cause the patient's death from implication of the surrounding parts in the disease. Colotomy and complete extirpation of the ring of diseased bowel has done more—in fact, has left nothing more to be done. The other paper was read by Mr. PEARCE GOULD before the Medical Society, and in it the principle was advocated not only of free extirpation of the diseased tissues in mammary cancer and of the implicated axillary glands, but also of those glands which, to all appearance, are healthy, but, from their close contiguity to the infected glands, may be on the verge of becoming themselves infected, and possibly are so. He quoted some striking illustrations of this, and we cannot but think that the procedure he advocated is based on rational pathological grounds. The logical outcome must not, however, be disregarded. It means this, if it means anything, that in no case is it wise to leave behind glands which can be extirpated, although they may present no evident signs of disease. It applies to cancers of the lip, tongue, penis, and other regions where the surgeon is enabled to remove the primary disease, but where glandular recurrences are so prone to occur, just as much as to the mamma. We say nothing of the practicability of such radical interference, and we are not unmindful of the fact that such glandular recurrence is not invariable, but we can see no hope for the complete extirpation of cancer—none, in other words, for its cure—until the stern pathological fact of glandular infection is recognised in all its significance by surgery.

THE Court for the Consideration of Crown Cases Reserved, in the case of the QUEEN *v.* MORBY—the said MORBY being one of the Peculiar People convicted at the Central Criminal Court before Mr. Justice HAWKINS for the offence of manslaughter in feloniously causing the death of his

child by neglecting to provide proper medical attendance—has arrived at a decision of very serious import. The Court consisted of Lord COLERIDGE, Mr. Justice GROVE, Mr. Justice STEPHEN, Mr. Justice MATTHEW, and Mr. Justice CAVE. The Court determined to quash the judgment of the jury at the Central Criminal Court. It may be in the memory of our readers that MORBY was one of the Peculiar People, and that his family were affected with very virulent small-pox, of which one, a boy eight years old, died. All medical precautions were neglected, and not even a medical man was called in, on the ground that such measures are opposed to Scripture—which, by the way, says very explicitly that the sick have need of a physician. If the action of the Peculiar People is consistent neither with Scripture nor with common sense and affection, it would seem to be not altogether contrary to law—at least, so the Court for the Consideration of Reserved Crown Cases has found. Lord COLERIDGE said that he and his brethren were all clearly of opinion that the conviction could not be supported. It was not enough, he said, to sustain a conviction of manslaughter to show a neglect of the legal duty to provide medical aid. It is necessary to show that the neglect had the effect of shortening life, and as the medical witness in this case, who did not see the deceased during life, was not prepared to go so far, the conviction could not be sustained. Such a decision, arrived at in such a Court, may be considered to be final and binding. It may be accepted as law. So much the worse for the law. The Peculiar People will feel considerable security now in ignoring the duty of providing medical assistance for their children. The worse the case the more secure will they be, for the more difficult will it be for a medical man, with the true modesty of science, to swear that the taking of medical advice would have saved or prolonged life. It is not enough that in his judgment such would have been the probable result. He must be prepared to dogmatise and assert that it would have been the certain result, and this position in regard to cases not seen during life is not likely often to be taken. We may expect, then, that the Peculiar People will be more peculiar than ever, and that they will have many imitators in acting contrary to common sense, to affection, and to Scripture, to everything but law—at least, the law of the higher courts.

It is terrible to think of the suffering to which this decision of the High Court may lead. It will be construed into a practical abandonment of the law that provides punishment for the parent who wilfully neglects to provide medical aid for his child, and cases will be multiplied in which suffering of all degrees and death itself will occur which might have been obviated if the judges had assumed that not to seek medical aid in extreme circumstances of disease is legally to shorten or destroy life.

A DISTINGUISHED company, presided over by the Prince of Wales, assembled on Wednesday at Willis's Rooms to celebrate the annual festival dinner of the Victoria Hospital for Sick Children, Chelsea. His Royal Highness, in pleading for the institution, bore testimony to the good management and excellent arrangements which characterised the hospital, and called attention to the necessity which existed for the provision of an isolated ward for infectious cases. Over £2500 as subscriptions were collected or promised during the evening.

Annotations.

"Ne quid nimis."

LORD DERBY ON HOSPITALS.

ON March 25th the hospital recently built at Littlecross, Lancashire, in connexion with the Bury Dispensary, was opened by Lord Derby with great *éclat*. His Lordship, after alluding to the gratifying circumstance that of the £13,000 expended in the erection of the building no less than £1600 had been raised by the working classes, referred to the completeness of the arrangements of the new hospital, and made some remarks upon the nature and scope of hospitals, which, though they have for the most part been uttered before, have seldom been advanced with more directness and point. About hospital patients he said there was no question of imposition. When a man has broken his leg there is no doubt he wants it set, and when a man is down with fever there is no question he requires hospital care and superintendence. Then there is the subject of indirect benefit which a well-managed hospital confers. An institution of that kind is a school of medicine and surgery. Such an institution gives opportunities for the study of diseases which cannot always be obtained in private practice. It helps to train those men on whose services we all rely in sickness, in accident, and in old age, and it is no exaggeration to say that princes and peers, great capitalists and great employers, men who never set foot inside the wards of a hospital, except perhaps in the capacity of casual visitors, do nevertheless indirectly derive as great an advantage from these institutions as do the classes for whom they are mainly intended. Then, again, the use of hospitals is not confined, nor ought it to be confined, to those who go there as applicants for gratuitous relief. The system of taking in paying patients, patients who can and who do contribute something to their maintenance, is one, he said, which has been growing in public favour, and which has strong reasons to recommend it. Some of these reasons his Lordship set forth in a plain and lucid manner, and he concluded with a suggestion that hospitals would never lack adequate support if all classes of the community, rich and poor alike, were properly impressed with the importance of contributing something towards their maintenance, inasmuch as all in various ways are benefited by the existence and work of such institutions.

ACONITIA.

THE subject of aconitia, and its mode of preparation, continue to excite much interest and discussion. Dr. Springmuhl of Breslau, writing to a daily contemporary, states that Morson's aconitia is not the real pure aconitia as made in the laboratories and chemical works of the Continent and in America. It differs, he says, both in composition and properties from the real aconitia, and is made by a process known only to the manufacturers. In its effects it corresponds, he thinks, to a concentrated extract of monkshood, representing the whole active properties of the plant. Dr. John Harley, in reply to these sweeping assertions, states that English manufacturers long ago succeeded in isolating the active principle of the aconite and in obtaining it in pure colourless, rhombic crystals, and that the German manufacturers have so far been foiled in their attempts. Rather, he says, than admit a scientific defeat they have called their own preparation true aconitine, and that made in England pseudaconitine. That there should be this marked difference of opinion as to what we mean by a word in such common and constant use as aconitia seems well nigh incredible. But that the discrepancy does exist is only too true, and the terms aconitia, aconitine, pseudaconitine, japaconitine, and napelline are used by writers on the subject in the loosest pos-

sible way. The aconitine of one authority is the pseudaconitine of another, and *vice versâ*. There can be no doubt, we think, that Morson's aconitia is prepared according to the Pharmacopœia process; but whether it is made solely from aconitum napellus is quite another question. Dr. Harley, in his endeavours to correct Dr. Springmuhl, falls into a very palpable error. He seems to be labouring under the impression that our English aconitia is a crystalline substance. It is true, in a paper of his on aconitia, he states that he used the pure crystallised alkaloids of Mr. Morson and of Messrs. T. and H. Smith of Edinburgh; but these were probably picked samples; and he should remember that our aconitia as sold commercially is now always amorphous; and that it is the aconitia made by what is called Duquesnel's process that is crystalline. Dr. Spingmuhl expresses a fear lest this want of uniformity in the use of the term aconitia should lead to serious consequences from the substitution in prescriptions of one form for another. His fear is not unfounded; and it is well known to those who are practically acquainted with the subject that on the Continent several fatal cases have already occurred from this cause. The continuance of this controversy serves to emphasise the statement made only last week in our columns, that the whole question is still *sub judice*; and that statements respecting the properties, chemical or physiological, of aconitia, cannot be received with too much caution.

ARMY RECRUITING.

THE annual report of the Inspector-General of Recruiting for the year 1881 shows the number of recruits who joined the army to have been 26,258, or 364 fewer than in the preceding year. The reports by the officers commanding regimental districts as to the physique of the men enlisted, and those of the officers commanding battalions as to the recruits who joined their corps, are stated to have been most satisfactory. Of the latter 377 were objected to, and in some instances were discharged as not likely to become efficient soldiers, but this number cannot be deemed excessive. There is no detailed information given in the report of the Inspector-General as to the number of recruits examined in 1881 from which those who joined were obtained, nor of their physical condition, but this is furnished as regards the recruits of 1880. It appears that in that year 46,108 men were medically examined, of whom 18,794 were rejected, being in the ratio of 407·6 per 1000. This was 45 per 1000 above the proportion in 1879, and still more above the average of a series of years. The Inspector-General observes that "these figures show increased vigilance on the part of medical officers." In that opinion we cannot concur. We believe the explanation of the increase of rejections to be that the superabundance of men desirous to enlist enabled greater strictness to be observed in carrying out the regulations in force as to the examination. In both 1879 and 1880 a sufficient number of recruits passed into the service to keep the force up to the authorised establishment. A much larger number than was required for this purpose having presented themselves, it was necessary to take only the most eligible; in fact, it became a sort of competitive physical examination. Had the number of candidates been smaller, it would have been necessary to be less rigorous in the examination, and therefore the rejections would have more nearly approximated the average. The Inspector-General appears disposed to attribute much of the large increase in the number of recruits who present themselves for enlistment to the introduction of the territorial system; but while we by no means wish to under-rate its influence we cannot overlook the fact that in the middle of 1880 the standard was reduced to 5 ft. 4 in. as the minimum, and that a reduction of the standard is invariably followed by an increase in the numbers who come forward, owing, of course, to the expansion of the class from which they may be obtained. As bearing on the question of the physical qualities of the recruits obtained under the present short service system, the report shows that while on the average of the preceding five years the proportion of recruits discharged as invalids in the first year of their service amounted to 14·7 per 1000, in 1881 it was only 10·9. In the appendix to the report the Inspector-General gives a table showing the minimum age, height, and chest measurement of infantry recruits in different European armies:—

	Age at enlistment.	Minimum height. Inches.	Minimum chest measurement. Inches.
English	19	64·0	34·0
French	20	60·5	30·87
Austrian	20	61·5	30·06
German	20	61·8	Not fixed
Russian	21	60·25	,,
Italian	20	61·45	31·5

In England there are no means of ascertaining correctly the age of a recruit, but he must have a physical development which is considered equal to that of a man of nineteen. During 1881 the average strength of the army at home and abroad was 181,187, the deaths were 2570, and the number discharged as invalids 3712, being respectively in the proportion of 14·18 and 20·49 per 1000. These are both considerably lower than in the preceding year. The death-rate is a little above and the invaliding under the average of the last ten years. During the same period, in an average strength of 115,367 militia-men, the death-rate was only 4·37 and the invaliding 25·89 per 1000, but there is great reason to doubt whether the whole of the deaths in that force were reported.

INHIBITION OF THE MEDULLA OBLONGATA.

SOME interesting observations on the inhibition of the spontaneous variations in the electrical currents in the medulla oblongata of the frog have recently been published by Setschenow. He has previously pointed out that the tetanisation of the nerves of the frogs by the induced current, or their chemical irritation with chloride of sodium, not only arrests movement, but also lessens the cutaneous sensibility so far as it is expressed by reflex action. This effect is especially conspicuous in frogs from which the cerebral hemispheres have been removed, if so strong an induced current is applied to the nerve that a strong tetanus is produced, or if a solution of salt is allowed to act upon the nerve for four or five minutes. When these observations were first made, their exact interpretation was impossible, although it was evident that the depression was not the result of any exhaustion of the excito-motor apparatus, since if the irritation of the nerve was suddenly arrested, the animal, although previously still, immediately began to move. In accordance with his previous conclusions regarding the physiology of the central nervous system, Setschenow concluded that the phenomena must be the result of inhibition. He is now able to demonstrate that this conclusion is correct. The proof is afforded by the spontaneous variations in the normal electrical currents which are always being evolved, under normal conditions, by the medulla oblongata. If the current is conducted from a section of a medulla oblongata which has been left in connexion with the spinal cord and sciatic nerves, and the sciatic is then irritated for two or three minutes by a faradaic current, or by a solution of salt, the normal variations in the electrical current of the medulla become slighter and less frequent, and may even, for a time, cease altogether. As soon as the stimulation is interrupted, the normal variations recommence, and in greater frequency and strength than before the irritation. If the spontaneous variations are regarded as the expression of the spontaneous activity of the

medulla, so that the functional state of the latter is comparable to that of the pulsating heart, the effect of the peripheral stimulation must be regarded as inhibiting this activity. The same conclusion is equally suggested by a consideration of the fact that the peripheral irritation has for its effect the arrest of all movement of the animal. These experiments show, further, that the accumulation of energy in the nerve centres continues during the state of inhibition, and probably in augmented degree.

THE LONDON WATER-SUPPLY.

THE Report of Messrs. Crookes, Odling, and Meymott Tidy to the President of the Local Government Board on the composition and quality of daily samples of water supplied to London during the year 1881 deserves the attentive consideration of every Londoner. The samples of water examined are limited to those derived from the mains of the seven companies which derive their supplies from the river Thames and the river Lea. From each of these companies daily samples were obtained, the total number operated upon being 2181, as compared with one sample per month from each company, upon which the official analyst founds his judgment of the state of the London water-supply. "Any criticism in praise or blame of the water supplied by the company during an entire month," say the reporters, "was founded on the results yielded by that single sample. The directors of the water companies felt, and we agreed with them, that it was impossible to judge fairly the purity or otherwise of a month's supply by an odd sample taken at random in the manner adopted. This might prove to be unsatisfactory, whilst the water supplied during the rest of the month was good, or *vice versâ*." Precisely an opposite course was followed by the reporters, and they believe that they have secured results trustworthy in themselves and sufficiently numerous to warrant the conclusions they have arrived at. First, with regard to organic matter contained in the water. "Taking," they say, "the organic carbon as a trustworthy index of this organic matter, it appears that, contrary to popular, though not to scientific opinion, the amount of organic matter present in the water supplied to London is, as a rule, exceedingly small. It is true that the variations in proportion appear at the first sight to be considerable; but where the absolute amount of organic matter in the water is so minute, never exceeding the $\frac{1}{1000}$ of a per cent., the variations from about one-fifth of this amount and upwards become, for the most part, quite insignificant." With regard to the colour of the water, scientifically determined, this is unobjectionable, the degree of brown in it being nothing like that observed in the Welsh Lakes or in Loch Katrine, "lauded as a pattern water," and there is "not the slightest evidence to show that the brown tint, dependent as it is on the presence of a minute trace of peaty matter, or some body resembling it, renders the water either injurious to health or objectionable to taste." The "clearness" of the water, unless under exceptional circumstances, was indisputable. "We do not hesitate to say that the water supplied to the metropolis," say the reporters, "is, as a rule, efficiently filtered." The proportion of "free oxygen" existing in the waters of the Thames and Lea is found nearly at the full quantity that the water can dissolve, the practical truth conveyed being that the waters are well aerated. Nitrogen (as nitrates and nitrites) and chlorine have been estimated in daily samples, and the results are given in tabular form. Of the "hardness," it is said the mineral matter in solution in the waters "consists mainly of the carbonates of the alkaline earths, with a small quantity of sulphates, nitrates and chlorides. No one suggests that these salts are detrimental to health; and we should be prepared to contend that they are actually useful to the animal economy, as one means of supplying constituents required for the organism." In stating their general conclusions on the matter of their report, the reporters adopt the general conclusions of the Royal Commission on Water Supply of 1869, and in conclusion they observe: "Taking into consideration the results of our extensive series of chemical analyses of the water supplied to London, and that the death-rates of well-water towns and river-water towns are practically alike, and of the further fact that in the metropolis there is very little to choose, judged by mortality, between districts supplied with deep-well water and districts supplied with river water, any slight differences being in the districts supplied with river water, we are of opinion that the filtered water of the Thames and Lea is unimpeachable in respect of its wholesomeness and suitability for town supply."

FISH AND "MEAT" AS FOOD.

THERE is some danger of the fish question falling out of memory. This is not to be tolerated after the interest which has been excited, and for some time maintained, in connexion with this important phase of the food problem. Whatever may be the nutritious value of fish as food—and we believe that to be very great—it must be evident that a full and cheap supply of fish would react so as to produce a lowering of the price of butcher's meat. The "purveyors," as they like to be called, are encouraged, and, in truth, enabled, to keep up the price of flesh because there is nothing to compete with it as a staple of the common food of the people. A revival of the old and healthy habit of living largely on fish would place the meat supply on an entirely new footing. This is manifest on the face of the facts; but what may not be equally apparent, though it is scarcely less noteworthy, is the consideration that nervous diseases and weaknesses increase in a country as the population comes to live on the flesh of the warm-blooded animals. This is a point to which attention has not been adequately directed. "Meat"—using that term in its popular sense—is highly stimulating, and supplies proportionally more exciting than actually nourishing pabulum to the nervous system. The meat eater lives at high pressure, and is, or ought to be, a peculiarly active organism, like a predatory animal, always on the alert, walking rapidly, and consuming large quantities of oxygen, which are imperatively necessary for the safe disposal of his disassimilated material. In practice we find that the meat eater does not live up to the level of his food, and as a consequence he cannot, or does not, take in enough oxygen to satisfy the exigencies of his mode of life. Thereupon follow many, if not most, of the ills to which highly civilised and luxurious meat-eating classes are liable. This is a physiological view of the food question, and it has bearings on the question of fish supply which ought not to be neglected.

THE ASSIMILATION OF FAT.

MOST physiological text-books teach that the fat of the body is not derived directly from the fat of the food. But from statistical analysis Hoffmann has arrived at the conclusion that the formed fat of the animal body arises not only from heterologous elements of the food, but also in part at least from ingested fat. Radzcejewsky concludes that the special destination of this fat is the intramuscular adipose tissue. A series of investigations, undertaken by Lebedeff in the clinical department of the pathological laboratory at Berlin, leads him also to the conclusion that the ingested fat is deposited unchanged in the fatty tissue of the body. Two dogs were kept fasting for a month, losing in the time about forty per cent. of their weight. Previous experiments have shown that, under these circumstances, all the fat of the body disappears. The dogs were then fed on a diet

which consisted of large quantities of fat foreign to their own nature, and a small quantity of flesh. Both dogs regained their normal weight in three weeks, and were then killed. One had been fed on linseed oil, and from its tissues was obtained more than a kilogramme of fatty oil, which did not become solid at the freezing point of water, and which corresponded closely in chemical characters to linseed oil. The second dog was fed on mutton suet, which had a boiling point about 50° C., and in its body, in the muscles, about the internal organs and beneath the skin, a form of fat was found which was almost identical with suet. The organs of each dog were free from disease. Thus it would appear that ingested fat, even such as is foreign to the individual constitution, may yet become transformed directly into the fatty tissue of the animal. Other experiments of the same investigator seem to show that this is true also of milk fat.

THE HOSPITAL SATURDAY FUND.

THE delegates of the Hospital Saturday Fund are not satisfied with the decision of the hospital authorities not to accept the proposal of the Hospital Saturday Fund to be allowed to send a representative governor for each £50 subscribed to hospitals and each £28 to dispensaries. There is great unreasonableness in the proposal. No similar proposal has been made by the Hospital Sunday Fund, which gives five times more to the hospitals and dispensaries. The modesty of the proposal of the Hospital Saturday Fund may best be illustrated by stating that if the Hospital Sunday Fund were to demand similar terms—to have a representative for every £50 given to a hospital—it would have fifty-six representatives in the governing body of the London Hospital. Mr. Morley, president of the Fund, admitted that the delegates were unreasonable in asking that their representatives should be put into the position of life governors, but he expressed himself as dissatisfied that the hospitals had not conceded some right of representation to the Fund. We think it not altogether unreasonable that some representation should be granted by the hospitals to the Hospital Saturday, and still more to the Hospital Sunday Fund. But the proposals of the Saturday Fund seem altogether out of proportion, and confirm an impression that the delegates are more able at framing demands than at gathering funds for the support of hospitals, which is their prime duty.

THE HEAD OF GUITEAU.

THE medical mind of America is still, it would seem, agitated about the physico-mental condition of Guiteau, the miserable assassin of President Garfield. It is one of the anomalies of advanced civilisation, operating on different nationalities even of the same race, that whereas the people of the United States apparently press forward more rapidly, and think, and feel, and act more intensely—and, perhaps, more impulsively—than we do, they prolong their impressions and experiences, while we hurry and curtail them. Had the miscreant now languishing in America under a conviction for murder, but still unsentenced, and in no near peril of being executed, been a condemned prisoner in England, he would have been hanged and forgotten some time ago. We do not aver that ours is the better mode of procedure, but it is at least remarkable that the "old" and "slow" people should be the most expeditious, and the community that invented lynching should be the most tardy in avenging its insults, and putting an end to its ignominies. We fail to recognise the slightest scientific interest in the case of Guiteau, who is undoubtedly a mean scamp of the most commonplace type and character. A recent number of the *Boston Medical and Surgical Journal* contains an able critique on the medico-psychological features of Guiteau's personality. It is, however, remarkable for the singular circumstance that the author, Dr. Allan McLane Hamilton, seems to claim the fact that the head of the assassin "reveals no special asymmetry" as evidence of his sanity, whereas asymmetry is well known to be one of the commonest characteristics of heads of the best and most intellectual type. It would be difficult, probably, to find a head belonging to any man of mark or pre-eminence in science or literature which was not asymmetric. The line of reasoning which Dr. Hamilton pursues is as untenable as that which a while ago found so much favour with our medico-psychologists, who, claiming errors of spelling in caligraphy as a symptom of mental disease, were logically forced back on the correlation that correct orthography must be evidence of sanity, in forgetfulness, or more probably ignorance, of the fact that the errors of functions which occur in disease are fruits of dissolution, and therefore in no sense *symptoms*. We strongly recommend our scientific friends across the Atlantic to abandon the discussion of Guiteau's case. There is nothing to discuss except his infamy, and the nation's folly in making him its hero even for a moment.

BLOOD-POISONING AT BRIGHTON.

BRIGHTON would appear to be undergoing a visitation of blood-poisoning. Health-seekers, and particularly those who are debilitated by recent illness, would do wisely to be on their guard. It has long been known to the careful and curious in matters sanitary that the "queen of watering-places" is a very hot-bed of pestilent sewer-gas. During the day the odours which rise from the street gratings are not noticeable; but those who have taken the trouble to examine these outlets in the early morning will not need to be reminded of the stench which offends the nostrils and excites nausea. If complaints are lodged at the Office of Health, the applicant, if he happen to be a visitor, and specially if he be a medical man, is treated with exceptional courtesy, and an inspector is sent, who, after a very elaborate investigation, declares that "those fish-sellers will throw the offal down the gratings," and straightway a water-cart is told off to flush the sewers. In this way the anxiety is allayed, and, the complainant being appeased, the authorities tide over the difficulty. Meanwhile the actual conditions are unaltered. The drainage of the whole place is defective, and a perpetual peril remains. During the last few days deaths from blood-poisoning by sewer-gas have occurred at Hove, and coroners' juries have been compelled to bring in verdicts to that effect. There is, unhappily, reason to believe that deaths from the same cause are of frequent occurrence, and that the danger is not confined to any one locality, but extends over the entire area of a watering-place which *ought* to be especially salubrious.

ATMOSPHERIC PRESSURE.

M. E. DE CYON, in a paper communicated to the Académie des Sciences, has come to the following conclusions regarding the influence of high atmospheric pressures on the animal organism: (1) The pressure only acts on the organism in an evident manner when it obviously modifies the relation of the tension of the gases contained in the blood; (2) this influence is exerted on the apparatus for circulation and respiration in conformity with the laws which regulate the action of the gases of the blood on the nerve centres which preside over the functions of respiration and circulation; (3) since oxygen is not a poison to the organism, animals die at high atmospheric pressure only because the carbonic acid, which is the chief excitant of the vaso-motor and respiratory centres, is considerably lessened in amount, and hence circulation and respiration become arrested, the former because of the undue diminution of the blood

pressure, the latter because of the condition of apnœa. The cardiac pulsations are quickened for the same reasons; on the one hand the oxygen, normal excitor of the accelerating nerves and centres, increases their activity; while, on the other hand, the diminution in the carbonic acid lessens the moderating influence of the pneumogastric nerves.

THE LATE PROFESSOR PANCOAST.

PHILADELPHIA has just lost one of its most famous surgeons and a man who must always take a very high place among those who have brought American surgery to its present high position. Joseph Pancoast was born in 1805, studied medicine at the University of Pennsylvania, graduated in 1828, and at once settled in practice in Philadelphia. In 1831 he began to teach practical anatomy, in 1838 he was elected to the Chair of Surgery in the Jefferson Medical College, but after three years he exchanged this for the Chair of Anatomy, which he ably filled till 1874. He was Surgeon to the Philadelphia Hospital from 1838 to 1845, and Surgeon to the Pennsylvania Hospital from 1854 to 1864. He was the author of an excellent treatise on Operative Surgery, and translated and edited several anatomical works. Dr. Pancoast was a distinguished teacher of anatomy, and was able to give greatly increased interest to the study by showing his class that it was a science not of the dead, but of the living. He emphatically taught applied anatomy, and made it a clinical study. A bold and very skilful operator, he was not content with these powers, and was particularly careful to investigate the condition of his patients prior to operation with a care and patience that are very unusual, and to this he owed a large measure of his acknowledged success. He had long been in failing health, and his death on March 7th from congestion of the lungs was not unexpected.

"DIGITATED STOCKINGS."

THERE is a warm dispute in progress as to the origin of digitated stockings—that is, stockings with a stall for each toe. As a matter of fact and history, stockings with stalls for the great toe are as old as, if not older than, those which are now generally worn. They naturally grew out of the swathing of the foot in loose wraps or bandages, one strip of which almost invariably passed between the first and second toes, like the string of the old sandal. We are inclined to think that digitated stockings would conduce to comfort, and spare many persons who now suffer from the development of soft corns between the toes, a serious trouble. They would also be more cleanly than the stockings in common use, because they would naturally absorb and remove the acrid moisture which accumulates between the toes, and which is the general cause of offensive odours from the feet. They will, moreover, give the foot better play, allowing its phalanges greater freedom of action. And, lastly, a well-fitted digitated sock or stocking will remove a mass of material from the toe of the boot, and, at the same time, secure increased breadth and space for expansion across the base of the toes. The new stockings, supposing them to be well cut and fitted, possess many advantages.

THE DEATH OF A NURSE FROM SMALL-POX.

A CORRESPONDENT in *The Times* writes in terms of great and natural regret of the death of Sister Clara in Guy's Hospital. It is the more lamentable as it occurred from small-pox contracted from a patient received into the Accident ward, said to have fallen from an omnibus, with a wound in the head and symptoms of concussion, but who, on the day following admission, developed symptoms of hæmorrhagic small-pox, of which, on removal to the Small-pox Hospital, he died in a few hours.

POISONING BY VERMIN-KILLER.

WE have had repeated occasion to refer to the facilities for accidental or intentional poisoning afforded by the readiness with which vermin poisons can be obtained. Two additional illustrations of the fact have recently been reported. An inquest was held at Middlesborough on March 16th, on the bodies of a woman, Jane Close, aged thirty, and her infant child. The woman, who was in a destitute state, had gone into a chemist's shop, and had been served by a "boy" with two packets of "mice poison"—"Adshead's Vermin and Insect Killer." The manager of the shop stated that he had been assured by the traveller of the maker of the poison, Ismay and Co. of Newcastle, that the vermin-killer did not contain strychnine. The sale of the "mice poison" was therefore not registered. The woman seems to have given the poison to her child and herself. The former was dead before medical help could be obtained, and the latter quickly died in spite of treatment. The evidence of Dr. W. J. Williams was to the effect that the deaths were due to strychnine poisoning, and the jury returned a verdict "that the deceased died from an overdose (!) of strychnine, which was administered to both by Jane Close while in an unsound state of mind." As reported, however, the facts are very discreditable to the sellers of the poison. If Adshead's vermin killer really contains strychnine, and the traveller asserted that it did not, it is clear that to this untruth the woman's death must, to some extent, be accredited, since the chemist gave evidence that he should not have sold it without registration had he known that the poison contained strychnine. It is another illustration of the dangers of the free sale of proprietary articles, poisonous or medicinal, the composition of which is unknown. Equally significant and equally sad is a suicide which occurred last week on Primrose-hill. A girl swallowed nine pennyworths of Battle's vermin-killer on an orange which she had taken with her for the purpose. She was immediately taken to the house of a neighbouring surgeon, where she died in an hour with severe symptoms of strychnine poisoning. It does not appear, from the published report of the inquest, from whom or how she obtained the poison, but the presumption is that she had no difficulty in obtaining it. The facility with which these patent poisons can be obtained renders the Sale of Poisons Act almost nugatory.

SURGEON-MAJOR PRESTON, A.M.D.

THIS officer, who was severely wounded at the Battle of Maiwand, when in medical charge of the 66th Regiment, and while attending on a wounded man prior to the retreat, has been awarded, by the Right Hon. the Secretary of State for War, promotion to the next higher rate of pay in his rank, with seniority next to the junior officer on such higher rate of pay. Dr. Preston is at present on half-pay in consequence of his wounds, and the well-deserved recognition of his gallant conduct will be appreciated by his numerous friends and brother officers.

ORGANISMS IN SURGICAL DRESSINGS.

TWO cases of peculiar blue and green discolouration of surgical dressings occurred in October last in a case under the care of Dr. Chauvel at Val de Grâce. The cause of the colouration has been investigated by M. Gessard. By cultivation he has succeeded in isolating an organism which, in a series of generations, appears to be very constant in its form, and in giving colour to the culture liquids. The organism is itself colourless, globular in form, one or one and a half micromillimetres in diameter, aerobic, and very mobile. It can easily be cultivated between the temperatures of 35° and 38° C. in neutralised urine or in decoction of carrot,

in saliva, sweat, albuminous liquids, the serum of a blister, or hydrocele liquid. The blue colouring matter secreted is the pyocyanine of Fordos, which is reddened by acids, and regains its blue tint under the influence of alkalies. It is easily extracted by shaking up the liquids with chloroform. If water, acidulated with sulphuric or hydrochloric acid, is then added, and the red acid solution is neutralised by potash and again treated with chloroform, a pure blue liquid is obtained, from which the pyocyanine can be obtained by evaporation in a crystalline form, prisms or needles, or rectangular plates. The watery solution is neutral on reaction, and is not changed by boiling.

DEATH FROM THE ADMINISTRATION OF ETHER.

DR. S. C. PARSONS of New York was consulted by a woman, aged fifty-four, with an unreduced dislocation of the head of the humerus into the axilla, of five weeks' standing. She was of medium height, well nourished, and her heart and lungs were sound. Dr. Hall administered ether, and Dr. Parsons, after some difficulty, reduced the dislocation, the operation lasting twenty-five minutes. About six fluid ounces of Squibb's ether were used, and the woman passed under its influence well. Five minutes after the reduction of the dislocation she drank some water. At 12.20 P.M. Dr. Parsons left her; she was seen by Dr. Hall at 12.45, and again at 1.15, when she was apparently well. But at 1.45 the house-physician found her cyanosed and dying; he applied active stimulating treatment, but to no good effect, for the woman died at 2.15. At the autopsy the heart, liver, and one kidney were found perfectly healthy, the other kidney was slightly fatty; the lungs were deeply congested. In his account, contributed to the *Medical News*, Dr. Parsons does not mention in what way the anæsthetic was administered. The danger of bronchial and pulmonary congestion following inhalation of ether vapour is well known, and it is so great and real that it precludes the use of ether in some patients, but for the congestion to have been fatal so quickly in a previously healthy woman, only fifty-four years of age, is very remarkable.

THE GOVERNMENT ANIMAL VACCINE ESTABLISHMENT.

THE Government, in founding their establishment for the cultivation of animal vaccine lymph, and failing to discover an original case of cow-pox with which to start the cultivation, were compelled to have recourse to the vaccine farms of Holland, and to lymph cultivated there by Dr. Carsten. But the recent discovery of a case of genuine cow-pox in France has enabled them to have recourse to a lymph less removed from the original source. We learn that this last discovered lymph has been introduced into the establishment, has produced excellent results, and that its use both upon calves and human beings leaves nothing to be desired.

ENTERIC FEVER AT THE ASHFORD SCHOOLS.

THE Guardians of St. George's, Hanover-square, have recently had the matter of enteric fever in the Ashford Schools under consideration. A report of Dr. Corfield's on the subject disclosed a very serious state of things there, owing to the want of proper care and supervision of the earth-closets, "a work," as one of the members said, "that required no special ability." A motion was made to the effect that the superintendent should be called upon to show cause why he should not send in his resignation; but it appeared reasonable to believe that the guardians themselves had not carried out necessary amendments of the school which had been required. The drainage, it seems, is badly constructed, and the superintendent had applied for more closets, ten only being provided for 400 boys. The request had not been complied with. Admiral the Hon. A. Duncombe, in the course of the meeting, expressed the opinion that "the earth-closet system was the most detestable ever introduced, and one that ought to be abolished," while Lord Frederick Fitzroy remarked that "his experience of the system was different." In the end it was decided to call the attention of the managers to the state of things at the school.

A PHOTOGRAPHIC GROUP OF THE INTERNATIONAL MEDICAL CONGRESS.

MR. BARRAUD of Gloucester-place, Portman-square, has published a photographic group of many of the members of the late International Medical Congress. It includes 684 figures, who are grouped in an effective manner. The portraits are remarkably good, and the picture is a valuable memorial of the wonderful meeting of last August. Although somewhat invidious to single out individual portraits, we cannot help referring to the striking success with which Mr. Barraud has caught the likenesses of Prof. Charcot, Dr. Donders, Sir Thos. Watson, Prof. Huxley, Prof. Pasteur, Prof. Virchow, Prof. Esmarch, Dr. Bigelow, Mr. Spencer Wells, Mr. Luther Holden, Dr. Billings, Sir Wm. Mac Cormac, Mr. Wood, Mr. Marcus Beck, Dr. Lancereaux, Sir Erasmus Wilson, Dr. West, and Dr. Wilson Fox. Mr. Barraud is to be heartily congratulated on the signal success of his picture, which is one of the largest and most interesting groups we have ever seen.

RECKLESS USE OF HYPODERMIC INJECTIONS.

A RECENT painful case of death caused by a hypodermic injection of morphia directs attention afresh to the dangers of resorting to this most perilous mode of administering drugs designed to relieve pain. The public should be warned against the practice of employing remedies hypodermically. So formidable a "remedy" should on no account be used except under medical advice, and when deemed necessary it ought to be given by practitioners. We have repeatedly urged the profession to discountenance the recourse to injections under the skin, which is becoming general. It is a practice of extreme hazard, as we are of opinion that surgical instrument makers should refuse to sell the requisite apparatus to lay persons, and that medical men should forbid their use.

SEVILLE MEDICAL CONGRESS.

A MEDICAL Congress is to be opened in Seville on April 9th, and will continue its meetings through the week, and visitors have various entertainments provided for them for several days in the ensuing week. We have been requested to announce that any British physicians or surgeons will be gladly welcomed at the Congress, and that the Spanish railway companies have made special reductions in their fares for members. The secretary of the Congress, Dr. Fuñon, Constitucion, 15, Sevilla, will be glad to send tickets of membership to anyone applying to him for them.

A PHARMACEUTICAL ERROR.

RUSSIAN journals relate the death of a child, one year old, from a pharmaceutical error. The child was suffering from bronchitis, and M. Dolinsky, "Médecin à Enfants," was called in and prescribed for the sick infant a mixture composed of quinine, musk, and cognac. After the first dose had been given, the child lost consciousness and eventually died. The child's father called upon M. Dolinsky, carrying with him the remainder of the medicine, and expressed his opinion that the death had arisen from

poison contained in the mixture. Whereupon M. Dolinsky, to show that what he had prescribed was not dangerous, swallowed nearly all the contents of the phial. Almost immediately afterwards he was seized with symptoms of poisoning, accompanied by violent vomiting, and narrowly escaped with his life. Eventually it was found that morphia had in error been added to the mixture by the pharmaceutist.

VACCINATION IN ISLINGTON.

THE Local Government Board has been in correspondence with the Board of Guardians of this metropolitan parish respecting the state of vaccination in it. It would appear from the vaccination officer's returns that of the children whose births were registered in 1880 and in the first six months of 1881 no less than 9·0 per cent. and 10·4 per cent. respectively are unaccounted for as regards vaccination; while in the adjoining Union of Hackney the percentages for the same periods are 6·1 and 6·0, and in Whitechapel, where the circumstances of the population make the vaccination officer's work particularly difficult, the percentages are only 2·3 and 2·5 respectively. Of the children born in Islington from 1873 to 1880 inclusive, no less than 5259 appear from successive returns to be unaccounted for as regards vaccination.

SPRING WATER FOR THE SOUTHERN ENVIRONS OF THE METROPOLIS.

A BILL, known as the London and South-Western Spring Water Bill, is now under examination by a select committee of the House of Commons, which has for its object the providing the southern environs of the metropolis with spring water, obtained from the chalk, of the important parishes of Epsom, Wimbledon, Putney, Barnes, Mortlake, Roehampton, Sheen, East Sheen, Kew, Richmond, Petersham, and Ham. Objections are numerous on the part of certain water companies, and also proprietors of lands, who dread the disappearance of streams at present passing through their grounds—a consequence, they believe, of the Spring-water Company commencing operations.

CHARING-CROSS HOSPITAL.

THE greater part of the staff and the intimate friends of Mr. H. R. Whitehead, F.R.C.S., who has just resigned his assistant-surgeoncy to this hospital, met at the Inns of Court Hotel at a farewell dinner on Wednesday last, to bid him good speed in the career he has chosen. After a distinguished student life, resulting in an appointment as assistant-surgeon to Charing-cross Hospital, and to the Ophthalmic Hospital, Mr. Whitehead determined on the more eventful *rôle* of the army service, and passed at the head of the list for Netley a few weeks ago. We congratulate the Army Medical Service on the acquisition of so promising a surgeon.

HOUSE AGENTS.

A CASE lately heard before Mr. Commissioner Kerr is instructive. A gentleman recently took a house at New Cross, the agent representing that the building was in good order. Presently a case of illness in the family caused an examination to be made of the drainage arrangements. These proved so defective that they were held to be the source of the illness. Thereupon the tenant claimed £50 damages of the landlord, the condition of the house not being such as represented when taken. The landlord pleaded that the statement was unauthorised by him. But Mr. Commissioner Kerr held that the landlord was bound by the statements of his agent, and gave a verdict for the plaintiff.

SMALL-POX AT SANDHURST.

WE are authorised to state that the rumour of a serious outbreak of small-pox having occurred at Sandhurst Military College has but few facts to support it. The disease was limited to three servants of the College (one of whom succumbed) and one cadet. In all but the fatal case the symptoms were remarkably mild. With very few exceptions the whole of the officers, cadets, soldiers, women, and children were revaccinated, and it is believed that no further apprehensions of the spread of the outbreak need be entertained.

THE death is announced, at the age of seventy, of Deputy Inspector-General William Ruffell Dalton, R.N. The deceased was Admiralty Surgeon and Agent for the Port of Harwich. He received the diploma of the Royal College of Surgeons in 1835, and passed as an assistant-surgeon in the Royal Navy. He served in H.M.S. *Sidon* in the Black Sea throughout the Russian war, including the siege and fall of Sebastopol and the bombardment and surrender of the fortress of Kimburn. In recognition of his services, Mr. Dalton had awarded to him the Turkish and Crimean medal and the Sebastopol clasp. The deceased, who was staff surgeon and senior medical officer of H.M. Dockyard, Pembroke, from 1869 to 1872, was admitted a Fellow of the Royal College of Surgeons of England in 1860.

A MEETING of the Royal Commission on Small-pox and Fever Hospitals was held at No. 20, Great George-street, Westminster, on the 24th ult. There were present—Lord Blachford, Sir Rutherford Alcock, Sir James Paget, Mr. A. W. Pell, M.P., Dr. A. Carpenter, Dr. J. Burdon-Sanderson, Dr. W. H. Broadbent, Mr Jonathan Hutchinson, and the secretary, Mr. Nathaniel Baker.

THE Council of the Senate of the University of Cambridge have recommended the establishment in the University of a Professorship of Morphology, with a stipend of £300 per annum, to terminate with the tenure of office of the first professor elected, unless the University decide that the chair shall be continued.

THE Queen has been pleased to approve of the appointment of Mr. E. Ray Lankester, M.A., F.R.S., to the chair of Natural History in the University of Edinburgh, in the room of the late Sir Wyville Thomson, LL.D.

WE have authority for stating that the announcement made by a contemporary of the appointment of Dr. D. J. Hamilton to the post of Professor of Pathology in the University of Aberdeen is without foundation.

ROBERT BRIDGES, M.D., Emeritus Professor of Chemistry in the Philadelphia College of Pharmacy, died on Feb. 20th, at the age of seventy-six.

SMALL-POX is reported to be raging in San Domingo, over 4400 deaths from the disease having occurred at Port-au-Prince and the environs.

AT the annual festival of the Surgical Appliance Society, held last week in the Cannon-street Hotel, the Lord Mayor, who presided, said that ten per cent. of the whole population of this country were in need of, or were using, some such instruments as the Society was providing. Subscriptions and donations to the amount of £673 were announced.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Wellington (*Urban*).—Dr. Meredith reports for 1881 a death-rate of 18·23 per 1000 of the population, and a birth-rate of 32·54 per 1000. Of the town-wells of the district he gives the following significant results of analysis: "11 were found very bad, 12 bad, 18 suspicious, 4 fairly good, and 9 good." In consequence of this report the sanitary authority think it no longer desirable to postpone the question of procuring a better supply of water for the inhabitants. Great improvements appear to have been made in the condition of the causeways and streets in the town, in the drainage and the diminution of catch-pits; but we read with distrust of these so-called improvements that the ventilation of sewers is still a vexed question with the authority, and that "all new houses built in the town have their drains connected with the main sewers." Dr. Meredith has the following observations on lead pipes used in sewerage arrangements:—"From inquiries I have made among persons in the town, and judging from what I have seen in the course of my inspections, I believe it may be taken for granted that sooner or later all lead pipes become corroded when used as closet soil pipes, and I suspect that the sudden and unaccountable smells occasionally perceived in dwellings are often due to minute perforations in such pipes, these perforations going from bad to worse, the offending pipe lying in the meantime, as is often the case, behind wall-paper or boards, which causes the noxious air to manifest itself at some place far away from its place of immediate exit from the soil pipe. Sometimes a stain on the wall paper or plaster over the course of a pipe may help to detect the mischief early. At all events, any mark of the sort, when it cannot be accounted for otherwise, should be inspected and inquired into."

Kettering (*Urban*).—Mr. J. Winter Dryland's report for 1881, to use his own words, is "a more favourable one in all respects than any of its predecessors." The death-rate was only 14 per 1000 of the population; the birth-rate 48 per 1000. The deaths from the principal zymotic diseases include one from typhoid fever and two from diarrhœa, among a population enumerated at the Census of 1881 as 11,092. Cesspools have been done away with, the sewerage of the town completed, and a new system carried out at the union workhouse. During the construction of this system and afterwards several untoward cases of illness occurred among the inmates of the workhouses. Suspicion was directed to the local well water-supply. This water had become polluted during the alterations of the premises. The source of this pollution was remedied; illness ceased, and has not recurred in the institution. In respect to diarrhœa among children, Mr. Dryland remarks: "It was noticed by some of the medical men in the town that in many of the worst cases of diarrhœa in children this year the milk had been allowed to stand from one supply to another in the same rooms where the excreta from the children still remained, which would in itself be sufficient to prevent the cure of the disease." In Kettering the water-supply is excellent and constant, the sewerage is good and the system of flushing efficient, vaccination is well carried out, a sanitary hospital exists always prepared to receive patients, and the scavenging, especially of ash-pits, is well attended to.

Sunderland.—The death-rate for the week ending the 4th March is returned at 22·7 per 1000 of the population.

Montrose.—Dr. S. Lawrence reports for 1881 a death-rate of 19·06 per 1000 of the population, as compared with 20·49 per 1000 for 1880. "Such a greatly diminished death-rate," he observes, "reflects satisfactorily on the general sanitary condition of the town; and may, it is presumed, be accepted as evidence of growing attention by all classes to the laws of health." Writing of the small-pox epidemic, with which Montrose was threatened last year, Dr. Lawrence remarks: "Happily north of the Tweed insane popular prejudice does not exist, as in so many quarters south of it, notably in the great metropolis, to counterwork philanthropic legislative enactment, and arrest the extension of a signal boon to humanity. The Vaccination Act for Scotland, of 1863, which secures vaccination to every child within six months of birth, has done, and continues to do, a great and beneficial service to our country, in preventing the outbreak and modifying the character of small-pox. It is to the credit of our countrymen that, with rare exceptions, this Act has been loyally honoured by the entire parentage of our land; and as a consequence the generation now growing up in all our towns and rural districts may be regarded as efficiently protected against the malignant and fatal form of this dreaded disease."

Scarborough (*Urban*).—Dr. J. W. Taylor reports a death-rate of 16·34 per 1000 of the population—"almost the lowest death-rate from all causes recorded in the borough, the year 1876 being a trifle lower—namely, 16·28 per 1000." The death-rate from zymotic diseases was 0·8 per 1000, "the lowest death rate ever recorded from this particular class of disease." The report shows that the sanitary administration of the borough is actively maintained, and that the health authority is determined not to rest content until its sanitary celebrity becomes not less assured than its topographical. Dr. Taylor obviously regards enviously the powers which a few towns have obtained for a compulsory notification of infectious diseases, and would gladly possess similar powers in the interest of his borough. But with the powers his sanitary authority possesses he is doing very much; and especially we should note that "the inspection and registration of houses in the town are still in progress, as will be found on reference to the work done in the Sanitary Inspector's Department; and I can only repeat that when this registration is completed, the sanitary authority will have every reason to be satisfied not only with the necessity for such an examination, but also with the fund of information and the means for further improving the sanitary condition of this borough which such a record will furnish."

Lytham (*Urban*).—Dr. William E. Pountney reports a death-rate of 17·4 per 1000 population, or, excluding the deaths of visitors, invalids, and others, a death-rate of 13·8 per 1000. The births were at the rate of 24·5 per 1000. Measles and scarlet fever prevailed in the town towards the close of the year, but with little fatality; but works of sanitary improvement, such as the construction of new drains, were brought to an end for the time being, "the borrowing powers of the Local Board having been exhausted."

Greenock.—Dr. Wallace, in his report for the four weeks ending Dec. 31st, 1881, records a mortality at an annual rate of 24·4 per 1000 of the population; and in his report for the four weeks ending February 4th a mortality at the rate of 25·8 per 1000. In his last-received report he has the following observations upon scarlet fever:—"In my last report it was stated that scarlet fever was abating to a considerable degree. During the period under review, however, there has been a renewal of its extension, and chiefly in a part of the south-western district of the town. On rigid inquiry it was ascertained that the disease was in a number of families who obtained their milk-supply from the same dairy-farm. The sanitary inspector accordingly visited the farm, which is in the Inverkip district, and finding no fewer than four of the farmer's children stricken with the disease, stopped the introduction of the milk into the Greenock district till I decided what was to be done. Next day I visited along with the sanitary inspector, and, after surveying the whole premises, recommended a course of proceeding to the farmer, who at once agreed to follow it out. On ascertaining afterwards that he had actually carried out my instructions—the essential parts of which were, the removal of the patients to an empty house in the neighbourhood of his farm, the disinfecting and cleaning of his house and its appurtenances, and the milking of the cows by persons not connected with his establishment—I sanctioned the bringing of the milk into Greenock for sale. From the measures thus adopted it is to be hoped there will be no further extension of the disease from this source. At the same time it may be stated that between the 19th January, when the disease broke out in the farm-house, and the 1st February no fewer than eleven families supplied with milk by the farmer were invaded by the disease, the number of individual patients being twenty."

THE GUILDFORD INFECTIOUS DISEASE HOSPITAL.

A site for this proposed hospital has been selected near Merrow Downs (used for recreation purposes by the Guildford people), and close to the dower house of the Earl of Onslow's Clandon Estate. Whereupon the solicitors of the Earl have given notice to the Urban Sanitary

Authority that if the authority proceeds with its intention of erecting a hospital upon the site mentioned, they will apply to the Court of Chancery for an injunction to restrain the authority from so doing. This threat, reported at a recent meeting of the Urban Sanitary Authority, has been taken to heart, and thrown all the determinations of the authority in regard to the hospital into confusion.

The Wandsworth Board of Works were recently foiled in their attempts to close a well in their district, reported to them by their officials as yielding unwholesome water. The proprietor of the well traversed the evidence of the Board by producing Professor Redwood as giving counter-chemical evidence, and by putting in the witness-box instances of long and healthy life by persons consuming water from the well. The case was dismissed by the sitting magistrates, and the Board of Works saddled with the costs.

A builder was recently fined by the Hove magistrates for having erected houses in which he had used as mortar a composition in which gravel, sand, and loam so greatly preponderated over lime that the local authority held it not to be mortar, and was in contravention of their by-laws as to new buildings. The magistrates accepted the opinion of the local authority, but, strange to say, two members of the authority gave evidence in support of the builder.

The Bradford Sanitary Association, the first association of the kind in Yorkshire, is reported to have received a large number of influential subscribers, and to have commenced active operations.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns, 5640 births and 3842 deaths were registered during the week ending 25th ult. The annual death-rate in these towns, which had steadily declined in the six preceding weeks from 29·8 to 22·8, was equal to 23·7 last week. The lowest death-rates in these towns during the week were 16·2 in Cardiff, 18·1 in Huddersfield, and 18·6 in Bolton. The rates in the other towns ranged upwards to 28·2 in Norwich, 29·2 in Wolverhampton, 29·4 in Blackburn, and 30·2 in Manchester. The deaths referred to the principal zymotic diseases in the twenty-eight towns were 632, and showed an increase of 47 upon the number returned in each of the two previous weeks; 251 resulted from whooping-cough, 162 from measles, 65 from "fever" (principally enteric), 64 from scarlet fever, 52 from diarrhœa, 24 from diphtheria, and 14 from small-pox. The lowest death-rates from these zymotic diseases occurred last week in Newcastle-upon-Tyne, whilst the highest rates were recorded in Bolton, Brighton, Oldham, and Blackburn. Whooping-cough caused the highest death-rates in London and Oldham; measles in Brighton, Bolton, and Blackburn; and scarlet fever in Nottingham, Sunderland, and Hull. The 24 deaths from diphtheria in the twenty-eight towns included 19 in London. The death-rate from "fever" (principally enteric) was highest in Liverpool and Nottingham. Small-pox caused 15 more deaths in London and its suburban districts, and one in Nottingham. The number of small-pox patients in the metropolitan asylum hospitals, which had steadily declined in the nine preceding weeks from 504 to 373, had further fallen to 350 on Saturday last. The new cases of small-pox admitted to these hospitals were 54 last week, against 47 and 60 in the two previous weeks. The deaths referred to diseases of the respiratory organs in London, which had been 473 and 397 in the two preceding weeks, rose again to 427 last week, but were 66 below the corrected weekly average. The causes of 88, or 2·3 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Derby, Huddersfield, Sunderland, and Cardiff; while the proportions of uncertified deaths were largest in Manchester, Oldham, Preston, and Bradford.

HEALTH OF SCOTCH TOWNS.

The annual death-rate in the eight Scotch towns, which had been equal to 23·6 and 21·7 per 1000 in the two preceding weeks, rose again to 22·5 in the week ending the 25th ult. The deaths referred to the principal zymotic diseases in these towns, which had been 75 and 92 in the two previous weeks, were 89 last week; of these, 26 resulted from whooping-cough, 18 from diphtheria, 17 from diarrhœa, 13 from measles, 8 from scarlet fever, 7 from "fever," and not one from small-pox. The annual death-rate from these zymotic diseases averaged 3·3 per 1000 in the eight Scotch towns, and ranged from 1·5 and 1·8 in Greenock and Dundee, to 6·4 in Paisley and 12·0 in Perth. The 26 fatal cases of whooping-cough showed a further increase upon recent weekly numbers, and included 11 in Glasgow, 8 in Edinburgh, and 4 in Aberdeen. The 17 deaths attributed to diarrhœa, although 10 fewer than those in the previous week, were above the average for the season; no fewer than 13 occurred in Glasgow, and 2 in Perth. The 18 deaths from diphtheria exceeded the number in any recent week, and included 6 in Edinburgh, 5 in Glasgow, 4 in Leith, and 2 in Greenock. The 13 fatal cases of measles were 2 below the number in the previous week; 4 occurred in Glasgow and 4 in Paisley. Three of the 7 deaths referred to "fever" were returned in Edinburgh, and 2 both in Paisley and Perth. Five of the 8 deaths from scarlet fever occurred in Glasgow. The 116 deaths from acute diseases of the lungs in the eight towns, although exceeding the number in either of the two previous weeks, were 22 below the number returned in the corresponding week of 1881. The deaths of infants in the eight towns were more numerous than those in the previous week, especially in Edinburgh.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 37·2 and 31·2 per 1000 in the two preceding weeks, rose again to 34·9 in the week ending 25th ult. During the first twelve weeks of the current quarter the death-rate in the city averaged no less than 35·1, against 25·9 in London and 20·1 in Edinburgh. The 233 deaths in Dublin last week showed an increase of 25 upon the number in the previous week; 32 were referred to measles, 5 to diarrhœa, 3 to "fever," 1 to whooping-cough, 1 to diphtheria, and not one either to small-pox or scarlet fever. Thus 42 deaths resulted from these principal zymotic diseases, and were equal to an annual rate of 6·3 per 1000, which was nearly twice the mean rate from the same diseases in the large English towns. The fatal cases of measles in Dublin, which had been 31 in each of the two previous weeks, were 32 last week; no fewer than 411 deaths from this disease have been recorded within the city since the beginning of this year. The 3 deaths referred to "fever" showed a further decline from recent weekly numbers; whereas the fatal cases of diarrhœa were more numerous, and considerably exceeded the average for the season. The deaths of infants were again excessive, while those of elderly persons showed a further decline, and were fewer than in any previous week of the year.

AMERICAN URBAN MORTALITY IN 1881.

A recent number of the American National Board of Health Bulletin contains a summary of the weekly reports to the central authority from 161 cities and towns of the United States for the fifty-two weeks ending 1st January last. The enumerated population of these cities and towns at the census in 1880 was rather more than eight and a half millions of persons, and the mean death-rate in 1881, calculated upon this population, was equal to 24·7 per 1000, against 22·4 in 1880. This increase, it is suggested, is only apparent, because "in the absence of official statements no allowance has been made for the increase of population since the date of the last census." As, however, the increase of the death-rate in 1881, compared with that in 1880, exceeded 10 per cent, it is quite impossible that it could entirely be accounted for by an under-estimate of population. A large part of the increase was due to the greater fatality of what are known as the seven principal zymotic diseases. The death-rate from these causes was equal to 5·59 per 1000 in the American cities during 1881, while in the twenty large English towns dealt with in the Registrar-General's weekly return, the rate from the same diseases did not exceed 3·4 per 1000. The highest death-rates from these diseases in the American cities were 2·49 from diarrhœal diseases, 1·01 from diphtheria, 0·65 from typhoid fever, and 0·67 from scarlet fever. Each of these rates, except the last, very considerably exceeded those which prevailed from the same disease in the English towns; the largest proportional excess was in the death-rate from diphtheria, which was more than seven times as high in the American as in the English towns. The deaths from small-

pox in the American towns during 1881 were 3831, equal to a rate of 0·45 per 1000; most of these deaths from small-pox occurred in New York, Hudson County, Philadelphia, Pittsburgh, Wilmington, Cincinnati, Chicago, and San Francisco.

THE BIRTH- AND DEATH-RATE IN FRANCE.

In an interesting report to the Statistical Society, M. Lafalrègue, the director of the Asylum for Derelict Children, states that France is nineteenth in the list of nations whose birth-rate is recorded, having only 25·7 births per 1000 of the population, as compared to 30·4 for Switzerland, 35·5 for Great Britain, 35·7 for Spain, 38·5 for Prussia, and 41·1 for Bavaria. The proportion of deaths is 24·2 per 1000, they being above the mean rate in Great Britain, Sweden, Norway, and Denmark, but below that in Germany, which is given at 27·4 per 1000. The deaths in France, taken with regard to the ages of the deceased persons, are as follows: Out of a million deaths, 193,000 of infants under a twelvemonth, 96,000 of children between one and five years old, and 26,000 of children between five and ten; while at the other end of the scale about seventy-six persons out of a million were over a hundred years of age. The proportion of deaths is greater among males than females except between the ages of five to twenty and of eighty to eighty-five.

IRISH CENSUS REPORTS, COUNTY CLARE.

The population of this county has been returned at 141,457, a number less than half what it was forty years since, and a trifle over 6000 less than in 1871. Pauperism exhibits a great increase; for example, in 1871 there were 2376 persons (1849 in-door, 527 out-door), or 1 in every 62 of the entire population, receiving poor-law relief; while in 1881 the number was 5057, or 1 in every 28 (2045 in-door, and 3012 out-door). The death-rate was 15·3 per 1000, against 18·3 for the whole of Ireland. As regards the condition of elementary education, 53·9 per cent. could read and write, 10·6 could read only, and 35·5 were illiterate.

THE SERVICES.

Surgeon-Major Sir Samuel Rowe, K.C.M.G., Governor-in-Chief of the Gold Coast Colony, has been granted leave of absence to England on medical certificate.

Surgeon-Major Frank Simpson, at present employed by the Colonial Office, will officiate as Lieutenant-Governor of Lagos during the absence of Mr. Blandford Griffith, C.M.G.

Deputy Surgeon-General J. Sinclair has arrived at Aldershot, and assumed the duties of Principal Medical Officer, vice Surgeon-General Stanhope Fasson, deceased.

Deputy Surgeon-General J. Holloway has been appointed Principal Medical Officer, Royal Victoria Hospital, Netley, vice Surgeon-General Manifold, who retires from the service, having attained sixty years of age.

ARTILLERY VOLUNTEERS.—1st Ayrshire and Galloway: Robert Allan, Gent., M.B., to be Acting Surgeon.

RIFLE VOLUNTEERS.—1st Essex: Surgeon John Cooper Quennell resigns his commission.—1st Devonshire: Acting Surgeon Frederick Gardner resigns his appointment.—The *Tynemouth:* Frank Rennie, Gent., M.B., to be Acting Surgeon.—3rd Hampshire: Charles Knott, Gent., to be Acting Surgeon.—1st Westmoreland: Surgeon and Honorary Surgeon-Major Samuel Noble resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Corps on his retirement.

ADMIRALTY.—Staff Surgeon Robert Nelson has been promoted to the rank of Fleet Surgeon in Her Majesty's Fleet, with seniority of February 27th, 1882.

The following appointments have been made:—Staff Surgeon Joseph Wood, M.D., to the *Encounter;* Surgeon Samuel C. Browne, to the *Impregnable*, additional, for service in the *Nautilus*, brig, during the cruising season; Surgeon Charles H. Wheeler, to the *Impregnable*, additional, for service in the *Pilot*, brig, during the cruising season; Surgeon Edgar G. Swan, to the *Lion*, additional, for service in the *Liberty*, brig, during the cruising season; Surgeon Arthur W. E. B. Barrett, to the *St. Vincent*, additional, for service in the *Martin*, during the cruising season; Surgeon Charles W. Sharples, to the *Boscawen*, additional, for service in the *Seaflower*, during the cruising season; Surgeon Robert W. Anderson, to the *Ganges*, additional, for service in the *Sealark*, during the cruising season; Surgeons Nicholas C. Ross, to Plymouth Division of Royal Marines, vice Everard H. Saunders; Thomas D. Gimlette, to the *Orwell*, vice N. C. Ross; Fleet Surgeon Astley Cooper, to the *Minotaur;* Fleet Surgeon Garland W. L. Harrison, to the *Cambridge*, vice Cooper; Surgeons Everard H. Saunders and Robert A. Simpson, M.B., to the *Minotaur*; Surgeon John L. Akerne, to the *Grappler*, vice Twigg; and Surgeon John Jennings, to the *Duke of Wellington*, vice Wood. Mr. Samuel Evans has been appointed Surgeon and Agent at Harwich, vice Mr. W. R. Dalton, R.N.

THE ASSOCIATION FOR THE ADVANCEMENT OF MEDICINE BY RESEARCH.

THE meeting called by the Presidents of the Colleges of Physicians and Surgeons of London was held on Tuesday last at five o'clock in the Library of the College of Physicians. Letters of apology and sympathy were read or notified from the Archbishop of York, Earl Derby, Earl Pembroke, Mr. Justice Grove, Sir Farrer Herschel, Lord A. Russell, Sir T. Acland, Sir Erasmus Wilson, Sir Thomas Watson, Mr. Goschen, M.P., Mr. Darwin, Professors Huxley, Humphry, Odling, Cleland, Gairdner, Fraser, Lister, and the President of the British Association for the Advancement of Science. Sir Wm. Jenner, Bart., occupied the chair, and among those present were Sir James Paget, Sir W. Gull, Sir J. Hooker, Sir Risdon Bennett, Sir G. Jessel, Sir Trevor Lawrence, Sir W. MacCormac, Professors Sanderson, Paget, Erichsen, Tyndall, Gamgee, Gerald Yeo, J. Marshall, Drs. W. B. Carpenter, C.B., G. Buchanan, Bristowe, Farquharson, M.P., G. Johnson, Hughlings Jackson, Cameron, M.P., Cholmeley, Wilks, Acland, Matthews Duncan, Andrew Clark, Pye Smith, Sieveking, Galton, Braxton Hicks, Owen Rees, and Messrs. Savory, Spottiswoode, Holthouse, Wheelhouse, Mason, Busk, Prescott Hewett, Spencer Wells, Bowman, De la Rue, Romanes, Scott Orr, M.P., A. J. Balfour, M.P., and N. S. Maskelyne, M.P.

Sir WILLIAM JENNER proposed the following resolution: "That with the view of bringing the legitimate influence of the medical profession more effectively to bear on the promotion of those exact researches in physiology, pathology, and therapeutics which are essential to sound progress in the healing art, an Association be formed, to be called 'The Association for the Advancement of Medicine by Research.'" He stated that several meetings of members of the medical profession and others interested in the advancement of medical knowledge had been held to deliberate on the best means of inaugurating an association for the advancement of medicine by research, and it had been determined to call together a representative meeting of men interested in medicine and the sciences on which it rested and with which it was allied, to express or not their approval of the scheme to be submitted to them. Although there were already a number of Societies to which those who had made scientific researches might communicate their results, there was at present none to guide research, and this want he hoped this Association would supply. It was not intended that the Association should limit itself to any one object, but being founded on a very broad basis, should carry on its work in all departments. He hoped it would exert its influence on the study of therapeutics, and investigate the effects of sewer gas and foul air upon the human constitution, and in such studies they would want the combined work of physiologists, pathologists, and chemists. Another subject that lay ready to hand was the influence of light, moisture, subsoil, infection, and injury upon tubercular disease. If such investigations were carried out by the right men in the right spirit he was confident the benefits to humanity would be incalculable. Every advance in physiology was a stepping-stone to an advance in pathology, for the latter is founded on the former; and he trusted the proposed Association would aid and stimulate professed physiologists. For the attainment of these objects there was no desire to infringe or evade the law of the land, or even to ask for a repeal or modification of any part of it.

But it would be the duty of the Association to watch most carefully the working of existing laws, and to see how far they attain their object, and how far existing machinery may unnecessarily hinder the work of physiologists. Sir WM. JENNER considered it most important that the Association should be guided by men for whom time had tempered zeal with discretion, and who would be able to restrain the ardour of younger men. Such men would be able and would endeavour both to enlighten the public and lessen their morbid sensibilities.

Mr. SPENCER WELLS seconded the resolution, and assured the meeting of the warm sympathy of the Council of the College of Surgeons with the movement.

Sir GEORGE JESSEL supported the resolution and wished all success to the Association. He considered it most desirable that the public should be informed that the future progress of medicine rested upon science. Although medicine had at times made great strides by some fortunate or accidental experiment, yet the real substantial advance depended on true scientific research, and on the habit of mind it fosters. The public also needed to be taught the necessity for experiments on living animals, the advantages obtained by them, the amount of pain inflicted, the number of times the experiments required to be repeated, and if the experiments produced any effect upon the moral nature of the investigator.

The resolution was put and carried unanimously.

Mr. SPOTTISWOODE (President of the Royal Society) moved: "That the Association consist of representative members of the medical profession, and of other persons desirous of promoting the above objects." He remarked that many people, unacquainted with medical art and science, considered themselves fully competent to say what shall, and what shall not, be done in its study. Medicine is so dependent upon all other sciences that he was glad to see that leading men in sciences other than biological were to be asked to join this Association. The question at issue was a very grave one, no less than this: should medicine be relegated to mere observation, or should it be experimental?

The resolution was seconded by Dr. QUAIN, who referred to the valuable results of Dr. Burdon Sanderson's experiments on the infection of cattle plague.

The resolution was carried unanimously.

Sir JAMES PAGET, Bart., moved: "That the Presidents, for the time being, of the Royal College of Physicians of London and of the Royal College of Surgeons of England be the permanent *ex-officio* Presidents of the Association; and that each of them be requested to nominate annually twelve persons, of whom six at least must be Fellows of their respective Colleges, to be representative members of the Council of the Association for the year, in addition to the following, who shall be *ex-officio* members—viz., the Presidents, for the time being, of the Royal Society, of the General Council of Medical Education and Registration, of the Royal Colleges of Physicians and Surgeons in Edinburgh and Dublin, of the Faculty of Physicians and Surgeons in Glasgow, and of the Royal Veterinary College of Surgeons, the Director of the Royal Gardens, Kew, the Medical Officer of the Local Government Board, the Regius Professor of Medicine and the Linacre Professor of Anatomy and Physiology in the University of Oxford, the Regius Professor of Physic and the Professor of Anatomy and Physiology in the University of Cambridge, the Professor of Institutes of Medicine in the University of Dublin, the Deans of the Medical Faculties of the Universities of Edinburgh, Glasgow, and Aberdeen, the Brown Professor of Pathology in the University of London, the Presidents of the British Medical Association, of the Council and of the Parliamentary Bills Committee of the British Medical Association, and of the following Societies—Royal Medico-Chirurgical, Pathological, Clinical, Epidemiological, Obstetrical, Medical, Hunterian, Harveian, Zoological, and the Society of Medical Officers of Health. That the Council be authorised to invite the co-operation of additional representative men, within the United Kingdom, as corresponding members of their body. That registered medical men desirous of promoting the above objects shall, with the consent of the Council, be admitted as members of the Association on the nomination of an ordinary or corresponding member of Council. That members of the Council, on their retirement, become ordinary members of the Association. That the President for the time being of the Royal College of Physicians of London and the President for the time being of the Royal College of Surgeons of England shall be alternately, for the term of one year, *ex-officio*, Chairman of the Council, and shall nominate a member of Council as Vice-Chairman for the year, such nominated Vice-Chairman to be re-eligible. The ordinary quorum of the Council shall be six. That the Council shall have the entire control of the business of the Association, and the entire management of any funds contributed for its general objects, or for any special purpose; and shall annually appoint a Treasurer and Secretary, who shall be re-eligible." Sir JAMES pointed out that it was purposed that all the members of Council were to be representative men, that not one was named, but all held office by virtue of their representing the views of large bodies of medical and scientific men. While he could not too much admire the zeal of individuals who, working alone, and unhelped by Government, public support, or any association, had done great and beneficent work, yet there were occasions when single persons were of small weight, and when an association could exert powerful influence on the public and the Government. Medicine once was one of the smaller branches of science pursued by the Royal Society, and medicine was in danger of further separation from the other sciences. He thought the Council would do great good if they would act as a council of reference, and prevent the performance of experiments which were unnecessary or hopeless. He suggested that great good would have been achieved if a skilled pathologist had accompanied the *Challenger* in her recent trip and had studied the diseases of all the places visited.

The resolution was seconded by Sir WM. GULL, Bart., who considered the step they were then taking a very important one. It was an announcement that they meant to pursue their science only on the best information possible, and that they did not *know* everything; the spirit of truth and of science was to guide them for the future in their work, and there was to be no pretension of knowledge or authority.

The resolutions were supported by Mr. Warren De la Rue, F.R.S.

The series of resolutions was carried.

Sir RISDON BENNETT moved: "That it shall be the principal duty of the Council to encourage original research, and to further the extension of scientific knowledge in the fields of inquiry specified in Rule 1. That, with this object, the Council shall take note of, and seek to remove, any hindrances which may appear to them to be operating adversely to the progress of medical knowledge. That the working of the Act 39 & 40 Vict., cap. 77, shall engage the watchful attention of the Council, and may rightly become the ground of interposition on their part. That no public action shall be taken unless agreed to at a meeting of the Council duly convened for that purpose, at which twelve members at the least shall be present, and at which the chairman and three-fourths of those present shall concur. That no annual subscriptions be required; but that members of the Association be invited to give such aid as they may desire to the general purposes of the Association, or towards special expenses incurred." It was very important that the Council should be composed of those best fitted to counsel scientific investigators, and for the most part of those who were conversant with scientific experiments, and who, by their social standing, were able to influence the public and remove the hindrances in the path of the investigators. For the present the chief public work of the Association would be the publication of information to meet the objections now raised against their experimental work.

Mr. ERICHSEN, in seconding the resolution, expressed his satisfaction that the Association did not contemplate to interfere directly with the Act, which was the outcome of the report of the Royal Commission, of which he was a member.

Sir J. LUBBOCK entirely concurred in the objects of the Association, for he fully believed it would be beneficial in diminishing the sufferings of man and the lower animals. It was impossible to have any increase in our medical knowledge without practical benefit to the race.

The resolution was carried.

Professor TYNDALL, in proposing "that the present rules, defining the objects and constitution of the Association, shall not be altered except by the written consent of three-fourths of the entire Council, after consideration at a meeting called for the specified object, on a fortnight's notice, and with the further written sanction of the two presidents," expressed his conviction that if the common sense of Englishmen was appealed to, it would curb the fanaticism of a few now so rampant. Never before had there been the same hope

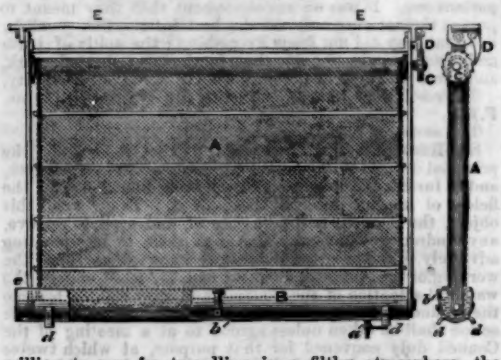
of giving medicine a scientific basis, and the only way of attaining that end was by promoting and protecting the experimental method.

Dr. Andrew Clark and Sir Joseph Hooker spoke to the resolution, which was carried.

On the motion of Dr. ACLAND, seconded by Dr. W. B. CARPENTER, a cordial vote of thanks was accorded to Sir William Jenner for calling the meeting and for presiding over it. This was briefly acknowledged, and the meeting broke up.

EXPERIMENTS IN AIR-PURIFICATION BY MEANS OF THE "CHEMICAL LUNG."

ON Tuesday night over twenty professional men and others interested in questions of sanitary science met together to witness one of Dr. Neale's demonstrations of his "Chemical Lung." The main features of the "lung," and the principal uses for which it is designed, have more than once been described in these columns, either by ourselves or by the inventor of the apparatus. In its inception, the "lung" was, we believe, chiefly intended for the purification of the air in the tunnels of the Underground Railway, though it has not been accepted for this purpose. When the details of the scheme were laid before the directors of the Company, either the official mind failed to understand them, or official acuteness perceived that, so long as the public are



willing to pay for travelling in a filthy atmosphere, the Company need not be so generous (or foolish) as to undertake any additional trouble or expense in efforts to make the air even tolerably pure. Such may be, and doubtless is, a sensible and proper view for railway directors to take. They are not professional philanthropists, and as regards those who have charge of the Underground Railway, it may be predicted that when it can be shown that it is to their advantage and interest to make travelling on their line unobjectionable as well as convenient, they will adopt necessary measures and incur the requisite cost, but not till then. Meanwhile, the world is not made up of railway directors, and the "lung" will find fair scope for its activities elsewhere—as, for example, in theatres, churches, chapels, lecture-rooms, hospital wards, out-patient waiting-rooms, police-courts, ships' cabins, cellars, &c.

The "Chemical Lung" is really a punkah of peculiar construction, and supplied with a solution of a caustic alkali, for which many of the impurities of air vitiated by overcrowding have a special affinity. Not only are sulphurous and carbonic acid gases speedily removed from the atmosphere, but test experiments have shown that organic matters are likewise withdrawn by the "Chemical Lung" or punkah.

Subjoined is a description of the "lung," with an illustration:—A is an endless cellular sheet passing over two rollers, the lower of which is sunk into a trough, B, which holds about three gallons of a saturated solution of a caustic alkali. (See diagram.) The apparatus is suspended from a bar, E E, attached to the ceiling of the room; and as the punkah swings to and fro a wheel and rat-het, C and D, cause the sheeting to revolve, one complete revolution of the sheet being accomplished about every four minutes. At *b'* is a water-gauge to indicate the amount of fluid contained in the trough; *c* is a pocket where the water and pieces of caustic alkali are supplied to the trough; *a'* is a tap for drawing the solution from the trough; and *d d* are feet for the punkah to stand on when not hanging up.

The experiments performed at the demonstration on Tuesday night were similar to those described by Dr. Neale in our columns on March 11th (p. 415). Their success was strikingly and marvellously complete. In a room 18 ft. by 15 ft., and 8 ft. 6 in. high, at the basement of the house, with the windows and door closed, fifty jets of a gas-stove were kept in full flame for an hour before the meeting. The temperature of the room was thereby raised to 85° F. A quarter of an ounce of sulphur was then burned in the room, rendering the air almost irrespirable, except through handkerchiefs, and exciting violent coughing. The punkah, charged with a solution of caustic soda, was then set in motion. In ten minutes the temperature had fallen 15° F., and though over twenty persons were present, each having an allowance of only 100 cubic feet, the air was rendered not only comparatively but positively fresh, and actually provocative of deep and full inspirations.

It is obvious that by means of the "Chemical Lung" not only may foul air be purified, but air may be prevented from becoming vitiated in crowded rooms, and this with extraordinary certainty, and at a cost and inconvenience that are almost inappreciable.

Correspondence.

"Audi alteram partem."

CASE OF POISONING BY GLORIOSA SUPERBA TREATED BY MORPHIA INJECTIONS.

To the Editor of THE LANCET.

SIR,—Having read an interesting case of poisoning by belladonna treated by hypodermic injections of morphia I am induced to send you the following notes of a case of poisoning by gloriosa superba treated in a similar manner, and which came under my observation while serving in India in 1877.

A man employed as a bullock coach driver, and who was in the enjoyment of sound health up to the time of the attack, returned from his usual morning's occupation and partook of coffee, &c. (his ordinary breakfast) which had been placed in the coachhouse awaiting his return. He was subsequently found in the forenoon in an insensible condition in the coachhouse, and was brought to the Government dispensary under my charge during my visit. No information beyond the above could be obtained, but free vomiting having been encouraged by emetics, I was enabled to detect under the microscope the presence of the seeds of the gloriosa superba, which are so well depicted in Dr. Waring's book on Indian therapeutics. The symptoms observable being of a similar nature to those produced by belladonna and allied plants, I directed the subcutaneous injection of morphia to be at once administered and repeated as might be indicated, and also a full dose of castor oil to be given as soon as the stomach would retain it. The result was most remarkable.

The patient entirely recovered consciousness, sat up in bed without aid, and conversed freely with the hospital assistant and others in the ward. He stated that he entertained no suspicions of any particular individual; that he was not at enmity with anyone; that he remembered drinking his coffee on his return, and lay down to rest, but did not remember anything more, or his removal to hospital. He appeared to have so entirely recovered from the effects of the poison that the native attendants were off their guard, and the antidotal effects of the morphia having lapsed, the poisonous effects of the drug again became predominant, and on my morning visit I found that the man had died during the night, the morphia injection not having been repeated according to instructions.

This case is remakable inasmuch as (1) there are but very few cases recorded of poisoning by this plant; (2) that the antagonistic action of morphia was so definitely seen; (3) that the nature of the poison was able to be demonstated at the time by means of the microscope, and compared with Waring's plate; (4) that, owing to the unfortunate omission to repeat the injections, a fatal result ensued, showing, I submit, that the improvement following

the subcutaneous injections of morphia was not coincident with the removal of the poison by vomiting, but that its toxic effects were actually kept in abeyance.

I am, Sir, yours obediently,
W. T. BUTLER,
Holland-road, W., March, 1882. Surgeon Madras Army (retired).

"ANÆSTHETICS."

To the Editor of THE LANCET.

SIR,—In the discussion as to whether chloroform or ether is the safest anæsthetic, the merits of the former in obstetric practice have either been altogether ignored, or else touched upon very lightly by your different correspondents. I think we must admit that it is clearly proved that ether is safer than chloroform in general practice, and I, for one, shall no longer employ the latter; but in obstetric practice I shall stick to an old and tried friend until I am convinced that it is no longer safe to do so. Unless I am greatly mistaken, no death from chloroform in puerperal cases has ever been recorded in this country. Anyhow, I have never heard or read of any; and after twenty years' practice, during which I have given chloroform to any woman in her confinement who has asked for it, no matter how delicate, and have generally single-handed maintained a state of insensibility to pain for two or three hours at a time, and always with the happiest results, I am naturally inclined to consider this anæsthetic in such cases quite safe and free from danger. I may add that I always administer it on a hollow sponge in measures of one drachm at a time, and I have never seen any unpleasant after-effects follow. I believe my experience is that of hundreds of other practitioners.

I shall be glad to elicit an expression of the opinion of others on this part of the chloroform controversy, and at the same time to inquire the reason for this wonderful immunity from fatal results which follow the use of chloroform in other cases. This immunity is the more remarkable when it is borne in mind that chloroform is more largely used in this branch of practice than in any other. I shall feel greatly obliged if those of your readers who may notice this subject will record their experience of any other anæsthetic than chloroform in obstetric practice.

I am, Sir, yours faithfully,
CHARLES GRABHAM, M.B. Lond.
Pontefract, March 20th, 1882.

MODIFIED LISTERISM.

To the Editor of THE LANCET.

SIR,—May I be allowed, through the medium of your columns, to recommend to surgeons in general practice (with whom complete "Listerism" is generally impracticable) a convenient antiseptic dressing for operation wounds &c.?

Next the wound I place a fold of lint soaked in carbolised oil (one in twenty); over that a layer of Calvert's carbolised tow, varying in width and thickness according to circumstances; and the whole is secured *in situ* with an ordinary bandage. A wash for the operator's hands and instruments, &c., is instantly made by dropping a few crystals of permanganate of potash into a basin of water.

The convenience of the above method is obvious; its efficacy I have recently tested in an operation for strangulated femoral hernia with satisfactory results, both as regards the healing of the wound and a complete absence of surgical fever or its allies; for, although the patient's surroundings were most unfavourable, the highest recorded temperature was 99·4°. In two excisions of lipomata, involving lengthy incisions, I have had equally good results, local and general.

I am, Sir, your obedient servant,
JAMES TURTON, M.R.C.S.
Heckmondwike, Yorks, March 14th, 1882.

EDINBURGH.

(From our own Correspondent.)

THE vacant Assistant-Physicianship, which has been more keenly contested than any recent medical appointment in Edinburgh, was filled up on Monday. Dr. Byrom Bramwell was proposed by the Lord Provost and seconded by Professor Rutherford; Dr. James was proposed by Dr. Haldane (President of the Royal College of Physicians) and seconded by Sir James Falshaw. On the vote being taken, nine were in favour of Dr. Bramwell and nine for Dr. James. The Chairman gave his casting vote in favour of Dr. James. Two members of the Board were unavoidably absent, both of whom were in favour of Dr. Bramwell. A proxy was tendered by Dr. Gillespie from one of the absent members, but it is doubtful whether it can be accepted. The question was referred to the law committee.

The annual students' concert was held on Friday last, and was a complete success, the music hall being full and the music good.

During the past two months a severe form of tonsillitis has been epidemic in Edinburgh. Measles and whooping-cough are also prevalent.

The session ends on Friday, the 31st, but the classes are already small, many students having gone down.

IRELAND.

(From our own Correspondent.)

ON last Friday, March 24th, death removed an eminent Dublin obstetric physician—Sir Edward Burrowes Sinclair, King's Professor of Midwifery in the Trinity College Medical School. Deceased was only fifty-seven years of age, and, besides the appointment he held in the University of Dublin, was physician to Sir Patrick Dun's Hospital and Maternity, and secretary to the vaccine department in Sackville-street, under the Local Government Board. He was a graduate in Arts and Medicine of the University of Dublin, a Fellow of the College of Physicians, an ex-vice-president of the College, and ex-assistant-physician to the Rotundo Hospital. Sir E. B. Sinclair also acted as an assistant-surgeon in the Army Medical Department, and during this period the subject of army midwives exercised his attention, and by his energy and influence he ultimately organised a training school for this class, in connexion with Sir Patrick Dun's Hospital. He instructed several hundred nurses during the last few years, and for his services in this respect received the honour of knighthood. He was one of the authors of a work on "Practical Midwifery," which comprised an account of 13,748 deliveries occurring in the Rotundo Lying-in Hospital during a period of seven years; and contributed some able papers on obstetric subjects to periodical literature, including one on "Induction of Premature Labour by the Water Douche."

The Twenty-third Report of the Board of Superintendence of the Dublin Hospitals for the year ended March 31st, 1881, but only published in 1882, would be of more value if less time were required for its production. Nine hospitals receive aid from Parliament, three being general hospitals, one fever, one ophthalmic, one lock, two lying-in, and the hospital for incurables, which receives a portion of the "concordatum fund." During the year 11,493 patients were treated in the wards of these hospitals, with a mortality of 639. The Board, in previous reports, called the attention of the hospital authorities to the inconveniences which attend the admission of patients labouring under delirium tremens, when no special or adequate means exist for their accommodation, and regretted that no satisfactory arrangements appear to have been made to meet the evil. On two previous occasions attention was directed to the unfortunate arrangement by which the post-mortem room of the Richmond Hospital is placed under the seats in the operating theatre. The suggestions made by the Board of Superintendence have not been adopted by the governors, and they again express their opinion that no dead bodies should be allowed to remain in the apartment referred to, and that a proper post-mortem room should be provided in a separate building. There is ample space in the post-mortem room of the Hardwicke Hospital for all such cases, and there is therefore the less excuse for the continuance of this bad arrangement.

Dr. Cameron, analyst of the county Down, has had his salary increased from £40 per annum to £80, in consequence of the increased duties devolving upon him. Dr. Cameron has endeavoured to carry out the provisions of the Sale of Food and Drugs Act in Ireland in as inexpensive a way as possible to the local authorities; and in order to do this he has accepted very small salaries, which in the case of

some counties barely pay expenses incurred. He has organised a staff of skilled assistants, and fitted up a special laboratory for food analysis. Latterly he has resigned the post of analyst to the Government in criminal cases, in order that he may devote his time exclusively to laboratory work and sanitation.

An inquest was held last week on the body of a police sergeant who died in the Adelaide Hospital. The physician under whose care he was suspected arsenical poisoning, and a post-mortem examination was held to confirm or remove this view of the case. On examination it was found that deceased had died from chronic gastritis, complicated with hepatic disease.

The Council of the Royal College of Surgeons will, on April 3rd, proceed to elect an Examiner in Ophthalmic Surgery to examine candidates for the Fellowship and Letters Testimonial of the College. Mr. Swanzy, lecturer on ophthalmic surgery in the College, has resigned his seat on the Council in order to qualify for the examinership, and should he be elected, must necessarily vacate his professorship. There are, I understand, three candidates for the post, but the probabilities are that Mr. Swanzy will be successful. For the vacancy on the Council it is rumoured that Mr. Wharton will be a candidate, and if so he may expect to be returned unopposed.

The land agitation has had a depressing effect on the funds of Steevens' Hospital, one of the oldest medical charities in Dublin. By the non-payment of rents the institution has become seriously hampered, and it is feared that some of the wards will have to be closed.

Small-pox is decreasing considerably each week in Belfast, and for the week ending March 18th there were 88 cases in the hospital for contagious diseases. During the week 24 were discharged, and one death took place in the Union Hospital, while only six fresh cases were admitted.

Dr. Kenny was last week re-elected medical officer of the North Dublin Union Workhouse, without opposition.

Dublin, March 28th, 1882.

PARIS.

(From our own Correspondent.)

M. DE UJFALVY, Professor of Oriental Languages at the National Library in Paris, was about eighteen months ago sent on a mission by the French Government to Cashmere, to study the geography of that most interesting country, and the manners and customs of its still more interesting inhabitants, from which he has just returned, bringing with him an amount of information which will be found a most valuable contribution to all that has been said and done by travellers who have preceded him in some of the unexplored regions. M. de Ujfalvy is already well known for his scientific researches in ethnography, and since his return from his last mission he has given most interesting accounts at the meetings of the Geographical and Anthropological Societies of Paris of his travels in the western regions of the Himalayas, and on the Kara Sorum mountains, and of the manners and customs of the people. The inhabitants of these provinces are composed of two distinct races, the Baltis and the Koulous; the former, according to M. de Ujfalvy, are distinctly Aryans; and if some of his predecessors confounded them with the Thibetans or Mongols, it is because they studied these peoples only from a linguistic point of view, whereas, to determine the characters of a race, the people should be studied anthropologically as well. Polygamy is practised on a large scale by the Baltis, but polyandry prevails among the Koulous, the junior husbands being generally the brothers of the first husband. M. de Ujfalvy entertained his audience with many interesting anecdotes respecting the social customs of these people, and, among others, he related the following, which caused some merriment, particularly among the fair sex. M. de Ujfalvy met an English functionary, with whom he travelled, and they had as a guide a young Koulou woman, accompanied by her seven husbands. In crossing a stream in baskets made of oxhide, as is the custom of the country, the young Koulou fell into the water, and was being carried away by the current, the husbands looking on with apparent resignation, if not indifference, and without making the slightest attempt to save their wife; but the English officer, like a true Briton, and being a good swimmer, gallantly jumped into the stream, and succeeded in saving the unfortunate woman from being drowned. In handing her over to the husbands the latter expressed their satisfaction, which the officer interpreted as a mark of gratitude, and this was all he expected. He learned, however, to his great astonishment, that it was not to thank him for having rescued their wife from imminent death, but they expected compensation in the shape of a life pension for the maintenance of her, who ought to have been allowed to die, and of her husbands, who are obliged to keep her. M. de Ujfalvy captivated the attention of his audience with the description he gave of the various articles he brought with him, and which he exhibited at the meeting, together with some photographs of the inhabitants, of whom he gave a most lucid description. The splendid collection of curiosities, which was presented as a gift to the State, will soon be exhibited at the museum of the Trocadero. At the Anthropological Society M. de Ujfalvy was literally invaded by questions; and some of the members present wanted to know what the prevailing diseases were among the inhabitants of those provinces; to which he replied that, not being a medical man, he could not satisfy them on that point. He noticed, however, that all the children bore marks of burns on the top of their head, and on each temple, which, he was informed, was practised in infancy, to prevent convulsions.

Dr. Brown-Séquard, Professor of Physiology at the Collége de France, stated in a very interesting paper he read at the last meeting of the Academy of Sciences, that recently he had met with several examples illustrating not only the possibility, but the great frequency, of the transmission by heredity of various organic conditions, consisting in changes of form, altered nutrition, or in morbid phenomena, produced in parents by lesions purely accidental. One hundred and fifty specimens in illustration of the above theme may now be seen in the museum of the Collége de France, all of which represent the same species of animal—the guinea-pig—in which, according to that learned professor, the nervous system had an exceptionally powerful influence on nutrition and on the secretions. The transmission of some of these artificially produced organic states—epilepsy, occlusion of the eyelids, exophthalmia, absence of phalanges of the toes, and sciatica—continued from one generation to another, to the fifth, or even to the sixth, generation, so that for one of these organic states—viz., exophthalmia, it would appear that a persistent and probably permanent type was produced. The question whether these alterations depended on a morbid influence, transmitted by heredity in these animals, suggested itself; to which Dr. Brown-Séquard does not hesitate to reply in the affirmative; and consequently he concludes his interesting communication in the following terms:—"It is evident from the above facts that in the guinea-pig there is very frequently in the descendants transmission by heredity of alterations of nutrition, very variable, which were produced in the parents by lesions purely accidental."

In a statistical report lately submitted to the Minister of the Interior, we learn the melancholy fact that there are in Paris at the present moment more than 4000 children under fifteen years of age totally blind; nine-tenths of these belong to the poorer classes, and the national institution intended for blind children can hardly accommodate more than 260. At this institution, and at other similar institutions supported by private contributions, the inmates receive no education until the age of ten, when the intellectual faculties have become blunted somewhat for want of proper training, and it would cost more trouble to make up for the time lost. An attempt is about to be made to remedy this defect in the private institutions. An asylum is to be established in the country far from the city, where will be admitted blind children from five to ten years of age, and where they will receive a preliminary education before entering the national institution. They will also be taught different trades. This eminently philanthropical idea is due to the initiation of M. Bourgeois, a well-known pedagogue, himself blind, and a *pensionnaire* in the asylum for blind adults called the Quinze-vingts.

The nomination of Dr. Cornil to the Professorship of Morbid Anatomy at the Faculty of Medicine, which I mentioned in my last as being certain, appeared in the official *Gazette* of the 25th instant.

Paris, March 28th, 1882.

MEDICAL NOTES IN PARLIAMENT.

IN the House of Commons on Thursday, March 23rd, a petition in favour of the Infectious Diseases Notification Bill was presented from the vestry of Chelsea.

On Friday, Mr. Dodson stated to Mr. Firth that the reports prepared by Messrs. Tidy, Odling, and Crookes upon the London Water-supply were not done at the order or expense of the Local Government Board, and he understood they were paid for by the water companies.

"Ear Vertigo."

In reply to Mr. Metge, the Attorney-General for Ireland said that the Court of Inquiry into the case of Sub-constable Forbes, of the Kells Police Force, who in October last was fined £3 for being drunk, examined a number of witnesses. Among those called for the defence were two medical men, one of whom had seen the defendant an hour and twenty-five minutes after the charge was entered, and who gave it as his opinion that the accused was then sober. The other, having seen the defendant two hours after the entering of the charge, pronounced the swaying motion and staggering gait to be caused by ear vertigo. The Court, however, after hearing the whole of the evidence, came to the conclusion that the charge was established, and the Inspector-General, on reviewing the proceedings, confirmed the finding of the Court, with which the Government had no intention of interfering.

In reply to a further question on Monday, the Attorney-General repeated the facts, and said the Court decided according to the weight of evidence.

Analyses in Criminal Cases.

Mr. St. Aubyn asked the Secretary of State for the Home Department whether, in cases of suspected poisoning, when an analysis is directed to be made, he would consider whether it would not be more satisfactory that the suspected person should have an opportunity of being represented professionally at such analysis.—Sir W. Harcourt: I have considered this subject, and I am clearly of opinion that it never would do to allow a delicate process of this kind to be conducted by a combination of persons who might be acting in adverse interests. That would tend to defeat experiments, which are necessarily of a very delicate kind. But I quite understand the sentiment, although I do not think it would operate in fact, which leads persons to desire that these experts should not be appointed by the Crown, who might be regarded as party to the prosecution. Therefore what I propose is to ask the Presidents of the Royal College of Surgeons and of the Royal College of Physicians yearly to appoint two independent experts, men of science, who may be referred to in cases of this character, to perform the necessary experiments. I believe that will insure what we want—the undisturbed action of impartial persons. At the same time, I wish it to be distinctly understood that in making this statement I do so not from any doubt or hesitation as to the entire impartiality and ability of the persons who have hitherto been employed by the Crown.

Union Officers' Superannuation.

Petitions in favour of Mr. Herbert Gladstone's Union Officers' (Ireland) Superannuation Bill continue to be daily presented from various parts of Ireland, and on Wednesday one was presented from the Metropolitan Branch of the British Medical Association.

Mr. Melcon gave notice of a question for Friday, pointing to the necessity of some such Bill.

The Lunacy Laws.

Mr. Stanley Leighton postponed his notice on this subject to April 25th. The following are its terms:—To call attention to the impropriety and danger of permitting private persons to make pecuniary profit by keeping in their custody lunatics of the wealthier classes, and to the unfairness of requiring the ratepayers to maintain lunatics of the middle and lower classes; and to move that all lunatics ought to be committed to the keeping of the State.

A Bill to amend the Public Health (Scotland) Act, 1867, was brought in by Dr. Cameron and read a first time.

The Vaccination Acts.

Mr. Burt gave notice of the following question for Friday: To ask the President of the Local Government Board whether he is aware that Section 31 of the Vaccination Act of 1867 was obtained from Parliament on the express understanding that it was needed in order to give jurisdiction over children born before the new Act came into operation, but since the Act of 1853; and whether, as the section is no longer needed for its original purpose, and as there are no children now to whom the rest of the Act does not apply, he will consider the propriety of ordering the use of Section 31 to be discontinued.

Sad Death of an Irish Pauper.

On Thursday, Mr. Corbet put a series of questions to the Chief Secretary for Ireland as to the death of a man named William Rooney, who, it was stated, was conveyed to Naas Workhouse from Ballymore Eustace, a three hours' journey, "on a very wet day, with nothing but three sacks to cover him, arriving in a dying state, and, though immediately attended by the doctor, who ordered him hot wine and had him wrapped up in warm blankets, gradually sank and died the next day." Mr. Forster said the Irish Local Government Board had ordered a strict inquiry into the case.

Obituary.

FREDERICK SEPTIMUS TATE, M.R.C.S., J.P.

MR. TATE, whose death, on March 7th, we chronicled a fortnight ago, had descended from an old Yorkshire family. His father was the Rev. W. Tate of Southsea, Head Master of the Royal Naval College, Portsmouth. The subject of the present notice was born at the seaport just named in 1820, and received his medical education at St. George's Hospital, the late Sir Benjamin Brodie being amongst his teachers. In 1845 he obtained the Membership of the Royal College of Surgeons, and in the following year began practice in Louth, at first in partnership with Mr. Philbrick, afterwards alone, and subsequently in conjunction with Mr. H. S. Shaw, whom he took into partnership in 1869. For many years Mr. Tate occupied the post of surgeon to the Louth Dispensary. He was elected to the civic chair of the town in 1863, and at the time of his death was senior borough magistrate, having been appointed in 1867. As was natural, the death of so prominent and esteemed a citizen, respected for his uprightness and sagacity, and beloved for his kindliness and *bonhomie*, has created a feeling of general sadness, which it will require some time to completely dispel.

JOSEPH WILLIAMS, M.D. EDIN., M.R.C.P. LOND.

DR. JOSEPH WILLIAMS, formerly of Tavistock-square, died on March 20th, at his residence, Holmhurst, Cambridge-park, Twickenham, aged sixty-seven. He pursued his professional studies with great success at Guy's Hospital, at Trinity College, Dublin, and in Paris and Edinburgh, whence he graduated M.D., with the gold medal, in 1839; he had previously been admitted a member of the Royal College of Surgeons of England, subsequently becoming a member of the Royal College of Physicians. As an author he was well known from his numerous and valuable contributions, for one of which, "On Narcotics and other Remedial Agents calculated to produce Sleep in Insanity," he obtained Lord Chancellor Sugden's prize. To THE LANCET he contributed papers on the Cure of Epilepsy, and on the Circulation of the Cerebro-spinal Fluid, &c.

AT a recent meeting of the St. Pancras board of guardians, a report from the Dispensary Visiting Committee was read, stating that the managers of the Central London Sick Asylums District were now prepared to receive £50,000 in consideration of the transfer of the whole of the property of the Highgate Infirmary to St. Pancras parish for their exclusive use.

THE annual meeting of the supporters and friends of the Hertfordshire Convalescent Home at St. Leonards was held last week. The building expenses, it was stated, had been defrayed, and a balance of £178 had been carried forward to the endowment fund. The expenses of the Home amounted to about £27 per week.

Medical News.

UNIVERSITY OF CAMBRIDGE. — At a congregation on March 25th the degree of Doctor of Medicine was conferred on the following gentleman:—

Owen, Herbert Isambard, Downing College.

APOTHECARIES' HALL. — The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on March 23rd:—

Adcock, Harold, Middleton, Northamptonshire.
Flaxman, Americ Edwin, New-court, Temple.
Nicholson, John Williams, Alston, Cheltenham.
Nutt, William Anthony, Plymouth.
Stretton, John Lionel, Kidderminster.
Wilson, Thomas, Maidstone.

The following gentleman also on the same day passed the Primary Professional Examination:—

Corner, Matthew Carsham, London Hospital.

A COMMITTEE has been appointed to draw up a scheme for the establishment of a Cottage Hospital at Chorley.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—The library will be closed from Friday, April 7th, to Monday, April 10th, inclusive.

MR. J. T. R. BURROUGHS, late Medical Officer for the Lee District of the Lewisham Union, has been granted a superannuation allowance of £49 12*s.* 3*d.* a year.

THE Rugby Football Union has given £100 to the Manchester Royal Infirmary out of the proceeds of a match, England *v.* Scotland, played lately at Whalley Grange.

TESTIMONIAL.—The members of the Brandesburton Mutual Improvement Society and some friends have presented Mr. Francis Calvert, M.R.C.S., on his leaving the village to practise at Beverley, with a valuable gold watch as a token of esteem and of their appreciation of his twenty years' service in connexion with this Society.

THE VENTNOR HOSPITAL AND THE LATE MR. J. JONES.—The late Mr. John Jones, of 95, Piccadilly, whose munificent bequests to the South Kensington Museum and to various hospitals and institutions have recently been made public, was, we understand, a foundling, and had no relatives. He was formerly a tailor and outfitter, and engaged in business in Regent-street. He retired, however, about thirty years ago, and employed his time in travelling and in making the splendid collection of pictures and works of art of which the nation is now possessed. He visited the Isle of Wight frequently, and from a personal inspection of the Royal National Hospital for Consumption at Ventnor selected that institution as his residuary legatee. It is stated he was struck chiefly by its perfect cleanliness. Mr. Jones's will was proved under £359,000. The residue to the Ventnor Consumption Hospital will be arrived at by deducting the costs of probate, legacy duty of ten per cent., and expenses of a Chancery suit from the balance.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

ALLNUTT, JOHN, M.R.C.S., L.S.A.Lond., has been appointed House-Surgeon to the Tiverton Hospital and Dispensary.

BEACH, J. F., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Cholsey District of the Wallingford Union.

BERRY, G. ANDREAS, M.B., C.M.Ed., has been appointed Assistant-Surgeon to the Eye Dispensary, Edinburgh.

BRICKWELL, BENJAMIN ARTHUR, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Beaconsfield District of the Amersham Union, vice Parrott, resigned.

CASS, HENRY, F.R.C.S. &c., has been appointed Honorary Consulting Surgeon to the Provident Medical Institution, Pimlico-road, vice Pick, retired.

CHURCHILL, J. FOOT, L.R.C.P.Lond., M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer and Public Vaccinator for the Second District of the Amersham Union.

COMPTON, THOMAS J., M.B., C.M.Aberd., has been appointed Senior Assistant Medical Officer to the Norfolk County Asylum, vice F. Seymour, M.R.C.S., resigned.

CRAWSHAW, BENJAMIN, L.F.P.S.Glas., L.S.A.Lond., has been appointed Medical Officer to the Second Tottenham District of the Bury Union.

HAWARD, FREDERICK ROBERTSON, M.R.C.S., L.S.A.Lond., has been appointed Attending Medical Officer to the Provident Medical Institution, Pimlico-road, vice A. W. Moore, deceased.

JONES, CYRIL LLOYD, M.D.Dub., M.B.Camb., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Fifth District of St. Saviour's Union.

JONES, F. FELIX, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Llanfyllin District and Workhouse of the Llanfyllin Union, Public Vaccinator, and Medical Officer of Health, vice E. J. Edwardes, M.B.Lond., resigned.

JONES, R. ROWLAND, M.R.C.S., L.R.C.P.Ed., has been appointed House-Surgeon to the Carnarvon and Anglesey Infirmary, Bangor, vice R. Langford Jones, resigned.

KEARD, C. DE W., M.A., M.D., L.R.C.P.E., L.R.C.S.E., has been appointed District Medical Officer and Public Vaccinator for the Portock District of the Williton Union, Somerset, vice Bartlett, resigned.

LOUGHER, RICHARD, L.R.C.P.Ed., L.F.P.S.Glas., L.S.A.Lond., has been appointed Medical Officer to the Spotlands District of the Cardiff Union.

LUDLOW, THOS. SUTTON, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Wolvey District of the Hinckley Union.

MACARTHUR, DUNCAN, L.R.C.P.Ed., L.F.P.S.Glas., has been appointed Medical Officer to the Thorp and Lofthouse-with-Carlton Districts of the Wakefield Union.

MACKAY, JAMES, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer to the Berwick-on-Tweed District of the Berwick-on-Tweed Union.

MCWILLIAM, ALEXANDER, M.A., M.B., C.M.Aberd., has been appointed Junior Assistant Medical Officer to the Norfolk County Asylum, vice Thomas J. Compton, promoted.

PARRY, T. SHARP, M.B.Lond., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the North-Eastern District of the Chester Union.

PAULIN, W. B., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the West Monkton District of the Taunton Union.

POLLARD, WILLIAM ROBERT, L.R.C.P.E., L.R.C.S.I., has been appointed Medical Officer and Public Vaccinator for the Mellor District of the Blackburn Union.

PRICE, ARTHUR, M.R.C.S., L.S.A.Lond., has been appointed Surgeon and Medical Referee to the London Road-Car Company.

ROPER, WM. ROBERT, L.R.C.P.Ed., L.F.P.S.Glas., L.S.A.Lond., has been reappointed Medical Officer to the Fifth District of the Chesterton Union.

TREHARNE, J. LLEWELLYN, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Roath District of the Cardiff Union.

Births, Marriages, and Deaths.

BIRTHS.

DEANE.—On the 26th ult., at 42, Albion-road, Stoke Newington, the wife of John Deane, M.R.C.S., L.R.C.P.Ed., of a son.

HAINS.—On the 24th ult., at The Plains, Totnes, the wife of Lalande Hains, L.R.C.P.Ed., L.R.C.S.Ed., of a son.

KILNER.—On the 25th ult., at Ladbroke-grove-road, North Kensington, the wife of Walter J. Kilner, B.A., M.B.Cantab., of a son.

LAMB.—On the 24th ult., at Kensington Park-gardens, W., the wife of W. H. Lamb, M.B., of a son.

ROTH.—On the 26th ult., at Rossmore, Preston-road, Brighton, the wife of Bernard Roth, F.R.C.S., of a son.

WILLS.—On the 22nd ult., at Bensham Lodge, West Croydon, the wife of Charles Wills, M.D., of a daughter.

MARRIAGES.

BENNETT—ARCHER. — On Nov. 8th, 1881, at Christ Church, Longford, Tasmania, by the Rev. Arthur Wayn, Arthur Bennett, M.D., late House-Surgeon at the London Hospital, of Stawell, Victoria, to Geraldine, only daughter of the late Edward Archer, Esq., of Northbury, Longford, Tasmania.

BROWN—CARTER. — On the 29th ult., at St. Matthew's Church, Chapel Allerton, by the Rev. R. R. Kirby, Vicar, assisted by the Rev. R. K. Snowdon, Vicar of Clifford, Walter Henry Brown, M.R.C.S., of Queen-street, Leeds, to Gertrude Elizabeth, youngest daughter of J. B. Carter, M.R.C.S., of Elm House, Chapel Allerton, near Leeds.

LAMB—BRIDDON.—On the 8th ult., at the Church of St. John the Divine, Brooklands, Cheshire, William Lamb, M.D., of Lewisham, Kent, to Mabel, third daughter of Henry Musgrave Briddon, of Sale, Cheshire.

WEBSTER—FAULKNER. — On the 23rd ult., at the Parish Church, Edgbaston, by the Rev. Henry Hardy, Joseph Henry Webster, M.R.C.S., L.R.C.P.E., of Wareham, Dorset, son of Joseph Webster, Esq., of Sherwood Rise, Nottingham, to Clara, daughter of Charles Faulkner, Esq., of Edgbaston, Birmingham.

DEATHS.

BUTLER. — On the 16th ult., at St. Thomas-street, Winchester, of pneumonia, Frederick John Butler, M.D., F.R.C.S., in his 63rd year.

GREENE.—On the 22nd ult., at Upper Leeson-street, Dublin, Michael Greene, M.D., of Ennis.

MOORE.—On the 24th ult., at his residence, Bessborough-street, S.W., Alfred W. Moore, M.R.C.S.

MUDD.—On the 26th ult., at his residence, West Pallant, Chichester, William Mudd, L.F.P.S.Glas., L.S.A.Lond., formerly of Hadleigh, Suffolk, aged 77. Friends will kindly accept this intimation.

RANKIN. — On the 2.st ult., at Carluke, Daniel Reid Rankin, L.F.P.S.Glas., aged 77.

SINCLAIR. — On the 24th ult., at Upper Sackville-street, Dublin, Sir Edward Barrowes Sinclair, M.D., King's Professor of Midwifery, T.C.D., aged 57.

TAYLOR.—On the 19th ult., at Pulborough, William Eeles Taylor, M.D., aged 67.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

Medical Diary for the ensuing Week.

Monday, April 3.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.

MEDICAL SOCIETY OF LONDON.—The President (Mr. Francis Mason) will Exhibit a Case of supposed Congenital Absence of Uvula (living specimen).—Mr. Richard Davy will give an Account of Cases illustrating his Method of Performing the Circular Amputation.—Mr. Thomas Bryant will Report a Case of Gastrotomy.—Dr. Hofmeister, "On the Carlsbad Waters and the Indications for their Use."

Tuesday, April 4.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2 P.M.

ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.—8 P.M. Mr. C. Staniland Wake, "On the Papuans and Polynesians."—Mr. C. Pfoundes, "On the Rites and Customs in Old Japan."

PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. The following specimens will be shown:—Intestinal Obstruction by a Diverticulum; Tumour of Shoulder-joint; Fibroid of Uterus; Congenital Cardiac Disease; a New Tract of Spinal Degeneration; Microscopic Specimens from Farcy; Colloid Scirrhus of Prostate; Two Cases of Myxoma; Bronchocele, with Secondary Growths; Dilatation of Heart; Epitheliома of Œsophagus; Cancer of Membrane of Brain; Calcareous Tumour in Brain; Filaria from a Camel; Malignant Lymphoma; Calculus formed on a Shell; Intra-thoracic Tumour; Defects of Valves of the Heart; Hyperostosis of Lower Jaw; Necrosis of Tibia; Hydronephrosis from Calculus, &c.

Wednesday, April 5.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.

UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.—Skin Department.—1.45 P.M., and on Saturday at 9.15 A.M.

HUNTERIAN SOCIETY.—7.30 P.M. Council Meeting.—8 P.M. Mr. W. Rivington, "On Cases of Rupture of the Bladder."

EPIDEMIOLOGICAL SOCIETY OF LONDON.—8 P.M. Dr. J. B. Russell, "On the Policy and Practice of the City of Glasgow in the Management of Epidemic Diseases, with Results."—Mr. M. D. Makuna, "On Observations on the Pre-Eruptive Stage in Small-pox, with History of Cases."

OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Dr. Oswald, Dr. Galabin, and others.—Dr. James Braithwaite, "On Two Cases of Removal of One Ovary only by the Vaginal Method."—Dr. Popow, "On the Corpus Luteum."—Dr. Champneys, "On the Pelvis and Skeleton of a Child showing Left Sacro-iliac Synostosis and Oblique Contraction."

Thursday, April 6.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

Friday, April 7.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

Saturday, April 8.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

METEOROLOGICAL READINGS.

(Taken daily at 5.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, March 30th, 1882.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Mar. 24	29·92	S.W.	50	49	..	56	34	·04	Raining
,, 25	29·76	W.	45	41	..	57	36	·07	Bright
,, 26	28·95	N.W.	46	40	..	51	34	·05	Cloudy
,, 27	30·13	W.	44	41	..	53	37	..	Cloudy
,, 28	30·21	N.W.	48	46	..	56	39	..	Cloudy
,, 29	30·01	W.	52	50	..	59	45	..	Overcast
,, 30	29·68	W.	49	45	..	58	42	..	Bright

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Lectures, original articles, and reports should be written on one side only of the paper.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

THE VENTNOR HOSPITAL.

SOME erroneous statements having appeared with respect to the actual amount of pecuniary benefit derivable by the National Hospital for Consumption, Ventnor, by the will of the late Mr. Jones, we are asked to state that the bequest, which is residue, will not reach £200,000, but probably a third of that sum, and that it is hoped, by the help of governors, to utilise the money by making provision for the numerous sufferers who have hitherto been unable to obtain admission to the institution.

"COMMON TOOTHACHE."

OUR attention has been directed to a magazine calling itself the "Journal of the British Dental Association," in which playful comment is made upon a letter from a medical man published in a recent number of THE LANCET, giving the palliative remedies he has found useful in cases of common toothache. The magazine in question goes out of its way to hint that THE LANCET can devote otherwise valuable space to the dental contributions of unqualified practitioners, which are of no special interest to the medical profession.

"FRESH VACCINE LYMPH."

To the Editor of THE LANCET.

SIR,—In answer to Dr. Seymour, reliable vaccine lymph, both calf and human, can be obtained from "The Association for the Supply of Pure Vaccine Lymph," 3, Hemmings-row, St. Martins-lane, W.C. (E. Darke, secretary.)

I am, Sir, yours truly,

Greenwich, March 28th, 1882. J. P. PURVIS.

TWINS.

To the Editor of THE LANCET.

SIR,—Will some of your correspondents say if they have known of twins—either two girls, two boys, or a boy and a girl—both having families, and oblige, Sir, yours truly, MEDICUS.

March 21st, 1882.

THE AUDACITY OF SOME UNDERTAKERS.

A MEDICAL MAN sends us a circular from an impudent undertaker offering him a commission on work sent or introduced by him. We have several times had to rebuke this insolent behaviour. Medical men to whom such a circular is sent should make the undertaker understand that his application will have an opposite effect to that intended, and is felt to be an insult.

MEDICAL ADVERTISING IN INDIA.

B. C. Rudra's letter, advertising himself and the ubiquitous "Dr. Smith," is in bad form.

M.D.—Parkes or Wilson.

Dr. Fred. S. Alford.—University College Hospital.

FALSE CERTIFICATION.

To the Editor of THE LANCET.

SIR,—One of the greatest difficulties the Medical Alliance have experienced in their efforts to suppress illegal practice is the protection afforded by registered medical men to all kinds of unqualified persons, extending from unqualified assistants to venereal quacks. One of the worst forms of that protection is the issuing of false death certificates. To check this practice, which to the public is both dangerous and fraudulent, and to the profession disreputable, the Alliance prosecuted several registered medical men, who were convicted, and fined from £5 to £10 each. These convictions are well enough known in the profession, still the practice of false certification prevails, and, consequently, I am continually appealed to to take up cases both in London and the country. As a last warning to these registered practitioners, for I will take no more trouble to warn them by writing, I will mention that, when convicting one of them, the magistrate stated his intention of committing for trial the next similar case that came before him. A person so committed would, upon conviction, be liable to penal servitude. Any person may institute a prosecution, either in a summary way or by indictment, and the following are the two clauses of the 40th section of the Births and Deaths Registration Act, under which proceedings are taken, and also the clause defining the punishment provided for the offence.

Section 40, Clause 1.—"Any person who wilfully makes any false answer to any question put to him by a registrar relating to the particulars required to be registered concerning any birth or death, or wilfully gives to a registrar any false information concerning any birth or death, or the cause of any death, or makes any false statement with intent to have the same entered in any register of births or deaths, shall for each offence be liable, on summary conviction, to a penalty not exceeding £10, and on conviction on indictment to fine or to imprisonment, with or without hard labour, for a term not exceeding two years, or to penal servitude for a term not exceeding seven years."

I am, Sir, your obedient servant,

March 22nd, 1882. R. H. S. CARPENTER.

Mr. A. J. McC. Routh.—Such irregular cases are very inconvenient to all parties, and call for much good feeling and good temper. It is well when a medical man leaves town, with an obstetric engagement imminent, to have a clear understanding with the patient, and to make an arrangement acceptable to her. Supposing this not to de done and his locum tenens to be unacceptable, he can then only rely on the kindness of a medical neighbour, who, it must be admitted, has an abstract right to take the case, fee and all. But to do so would not be neighbourly or doing as one would like to be done to. Supposing A. and C. to be on perfect professional terms, the absence of A. to have been unavoidable or for urgent reasons, and the patient to be willing, the proper course to pursue would be for C. to hand over the case and the fee to A. If the absence of A. were on grounds not urgent, we think C. should receive half the fee and hand over the case.

MEDICAL PRACTICE IN PIETERMARITZBURG.

To the Editor of THE LANCET.

SIR,—Having observed the scarcity of medical gentlemen in this rapidly rising city, which has doubled its population within the last two years, and the tremendous amount of work entailed upon the present few doctors in consequence of the large percentage constantly ill, in the noble cause of humanity I take the liberty of making this known through your columns in the hope of inducing a few good young doctors to come out here, where at least another dozen would, I think, find plenty of hard work.

I sent twice for a doctor to see my sister, who was seriously ill with fever (temp. 105°). The doctor could not find time to come, and I had to do the best I could for her myself. This state of things should not be. The remedy is, of course, an influx of doctors.

I beg to remain, Sir, yours truly,

WILLIAM NOLAN,
Chemist and druggist, Commercial-road, and 7, Church-street.

Pietermaritzburg, Natal, Feb. 20th, 1882.

MEETING UNQUALIFIED PERSONS IN CONSULTATION.

Mr. Charles Grabham denies emphatically that he has ever, in the course of his practice in Pontefract, extending over twenty years, met an unqualified practitioner in consultation.

BUSINESS CARDS.

IN answer to numerous correspondents, we may say once for all that it is not professional in a medical man to insert his address among the business advertisements of newspapers.

MARRIAGE: LUNACY: IDIOCY.

To the Editor of THE LANCET.

SIR,—I was recently consulted in the following case, and asked for an opinion as to the risk to the mental capacity of the offspring (if any). I am inclined to think the risk slight, and gave that opinion, but some of the friends are very doubtful on the subject, and therefore object to the marriage. I should, therefore, feel obliged for an early opinion from yourself or some of your readers. I should also be glad for a reference to any work on the subject.

Briefly the case is—A. B., a strong, healthy young gentleman, with an excellent family history, is desirous to marry C. D., a fairly healthy young lady, whose family on both sides are stated to be of a nervous temperament, the mother being highly neurotic, with a most irritable temper. C. D.'s elder sister, about thirty, has been confined in a private asylum, but discharged, and is now residing in a farmhouse, where she is looked on as a harmless idiot. She has a good memory, but quite deficient in any logical power. C. D. has several brothers and sisters, none of whom are remarkable for their mental powers—indeed, the boys are rather deficient than otherwise, though at present showing no signs of lunacy, idiocy, or epilepsy.—I am, Sir, faithfully yours,

March 21st, 1882. PERPLEXED JUNIOR.

HYDROPATHY AND MEDICAL HOTEL KEEPING.

To the Editor of THE LANCET.

SIR,—We have recently heard much of the relations which should, or should not, exist between the profession generally and those members of it who practise homœopathy. We ought not, I think, to stop here, but to extend our considerations to the relations which should exist between us and those who practise other systems, as, for instance, hydropathy. Turning from your remarks in THE LANCET of Saturday, Feb. 25th, upon the Mont Dore Hotel to the advertisement columns of the *Scotsman*, I found under "Hotels, hydropathics, &c.," no less than ten of these hydropathic establishments advertised, and to seven of these advertisements appeared the name of a medical man under various designations, from "physician superintendent" to "consulting physician."

The difficulty in keeping our fees at a proper standard is acknowledged, but is it to be wondered at when advertisements of "board, medical advice, and good society" at 7s. 6d. per diem stare the public in the face? If the profession would at once express its disapproval of this sort of practice and show its disapprobation by cutting off the offenders, as has been done in the case of avowed homœopaths, we should have, if not less of it, at least the satisfaction of knowing that they were not recognised by us.

I am, Sir, your obedient servant,

March, 1882. ORTHODOX.

EDUCATION IN IRELAND.

To the Editor of THE LANCET.

SIR,—As the quality of the teaching in the Queen's Colleges in Ireland was vainly called in question in the House of Commons last week, it may be worthy of notice that Dr. H. H. R. Charles, who obtained the first place for the Indian Medical Service in the recent examination, heading the first home army man by 200 marks, is a graduate in medicine and surgery of the "Queen's University in Ireland," and was educated at Queen's College, Cork; also, at the same examination, the first place for the Naval Medical Service was obtained by another Queen's College, Cork, man—viz., Dr. W. G. K. Barnes, M.Ch. Within a twelvemonth undergraduates of Queen's College, Cork, have won the Blue Riband of the Schools three years, as last year A. Mercer Davies, of that college, obtained the first place and highest marks in the service examinations. To produce such results the education must be thorough.

I am, Sir, yours truly,

March 27th, 1882. M.D., M.Ch.

SALICYLATE OF SODA AND ACUTE RHEUMATISM.

To the Editor of THE LANCET.

SIR,—Symptoms, when really marked, are, I think, worth notice. A. V——, aged forty-seven, was taken with acute rheumatism, having had it five times before. On one occasion he was invalided for seven months. Mitral mischief distinct. First treatment: Bromide of potassium, bicarbonate of potash, iodide of potassium, and colchicum wine freely for two days, followed by fifteen grains of salicylate of soda and five grains of carbonate of ammonia for the four following days. On the tenth day the patient dressed with a little assistance, and came downstairs. His father died suddenly of rheumatic valvular disease.

I am, Sir, yours faithfully,

R. R. MERRY, L.R.C.P. Lond., &c.

Hemel Hempstead, March 27th, 1882.

SWISS EXAMINATIONS.

Dr. W. Thornton Parker, of Ventnor, in a letter to us on the above subject, states that the standard of medical education in Switzerland is not what might be gathered from the communication which appeared in our issue of March 4th. From his own experience and observation he disputes the accuracy of the statement that 'due indulgence is given to those who speak the language imperfectly." Dr. Parker is not inclined to attach a very high value to the attainments of medical practitioners in Switzerland, and he declares that no examination exists on the Continent to-day, even in Vienna, Berlin, or Paris, superior to first-class British examinations.

Mr. Davies (Aberdare).—Next week, if possible.

S. L. has not enclosed his card.

Mr. Murray.—We regret we cannot supply the information desired.

Mr. Howard Marvin.—Mayne or Hoblyn.

HOMŒOPATHY AT THE LONDON SCHOOL OF HOMŒOPATHY.

To the Editor of THE LANCET.

SIR,—Your correspondent, who signs himself "A Faithful Hahnemannian," complains that, in my capacity as a lecturer on materia medica at the London School of Homœopathy, I do not teach homœopathy. He bases his assertion on a paragraph in a lecture recently published by me on posology in relation to homœopathy. That the conclusion drawn by me from the examination I had made of the views which have been expressed and the experience which has been recorded by homœopathic physicians during the last sixty or seventy years is not that which was arrived at by Hahnemann is true enough, but as Hahnemann was not divinely inspired, his conclusions are open to criticism. His opinion that the 30th dilution was the best in all cases was dogmatically stated; no evidence was adduced in support of it. It is an opinion which, as Dr. Black has said, has not stood the test of "the exigencies of practice." But, beyond all this, I have yet to learn that the word "Homœopathy" comprehends all that Hahnemann taught. In my opinion it does nothing of the kind. The words Hahnemann and Homœopathy are by no means synonymous; the former includes the latter truly, but it also includes a great deal more.

Homœopathy is simply and solely a law or rule of drug selection. It is obviously true that the dose of a homœopathically selected medicine must be smaller than one that is antipathic to the condition requiring relief, but the degree of smallness can only be determined by experience. The unsubstantiated assertions either of Hahnemann or of one of those who, like your correspondent, imitate him in nothing so much as in his unfortunate propensity for dogmatising, must be regarded as of no account.

Opinions of the most opposite and varied character as to the best dose of a homœopathically selected medicine have been expressed over and over again during the last sixty or seventy years. In the lecture your correspondent has alluded to I have endeavoured to examine these views impartially. The conclusion which this study, as well as my own experience, has forced upon me I have stated; and, notwithstanding your correspondent's objection to it, I believe that it represents the opinion of at least 97 per cent. of those medical men who in this country, selecting their medicines on the principle of similars, are in so doing practising homœopathy. I am, Sir, yours, &c.,

Henrietta-street, Cavendish-square, ALFRED C. POPE.
March 25th, 1882.

To the Editor of THE LANCET.

SIR,—As you have allowed "A Faithful Hahnemannian" (who seems oblivious of the proverb about the bird that fouls its own nest) to impugn the teaching delivered at the London School of Homœopathy, I crave permission, as one of the lecturers there mentioned by him, to say a few words in reply. I leave my friend, Dr. Pope, to deal with the question of posology. He will easily show that it is non-essential to homœopathy, whatever it may be to Hahnemannism. I will only add that the passages quoted from the "Organon" appear for the first time in its fifth edition (1833), and that up to 1829 nothing was said there about homœopathic doses save that they should be sufficiently small to avoid aggravation and collateral disturbance—i.e., that they should be strictly alterative.

I am assailed because I have said that arsenic has "no hepatic action." As there is no question here of better or worse homœopathy, the imputation of wrong teaching is purely gratuitous; but it is no less unfounded. By action on an organ pharmacologists mean such power of disturbing its functions or altering its tissue as shall show an elective affinity of the drug for it, so that it can be used in its disorders with an assurance of direct operation thereon. Such action on the liver mercury has, and podophyllum, and phosphorus; but such arsenic has not. Your correspondent's reference to Christison is quite wide of the mark. What that authority shows is that arsenic is largely found in the liver in cases of poisoning by it; he does not describe any inflammation or other morbid change as set up by those—as, for instance, in the stomach. "A Faithful Hahnemannian" is doubtless accustomed to deal with symptoms only, ignoring pathology and morbid anatomy. He may do useful work in his own field, but he must not criticise those whose studies are further pushed. I am, Sir, faithfully yours,

Brighton, March 27th, 1882. RICHARD HUGHES.

RED LIGHTS AND BRASS PLATES.

Censores Minorum complain of the alarm created in a rising young western suburb by the display of red lights and big brass plates. It is poor consolation for our correspondents to say that such practices are not unknown in other parts of the metropolis. They are in very bad taste, and cannot be too much discouraged and denounced. Closely associated with this evil is another, complained of by a dispenser—the late hours to which doors are kept open and gas kept burning, long after all shops are closed. Medical men, for their own sakes, as well as for the sake of their dependents, should aim at "early closing."

THE LONDON FEVER HOSPITAL.

Mr. Malcolm Morris, in a letter to the *Standard*, reiterates the gloomy foreboding of Lord Devon that the London Fever Hospital will be closed in a few months for want of funds. We refuse to believe that either this or any other great hospital of London, fulfilling such useful functions, will have to be closed for such a reason. It is very important to ascertain the explanation of the starvation of our hospitals. We are greatly concerned about it, and call all charitably disposed persons to the rescue of institutions that are the glory of our civilisation.

Surgeon.—The limb should be put up in a posterior angular splint to fix the elbow-joint at a right angle, and the hand in the position of moderate supination. By this means the displacement of the fragments of the radius is as far as possible corrected. By careful passive movement after three weeks ossification across the interosseous space should be prevented. The usual position of semi-pronation (thumb up) does not fulfil the indications.

COMPOUND PRESENTATION (FOOT, FUNIS, AND HAND).

To the Editor of THE LANCET.

SIR,—In the obstetric cases recorded by Drs. Clarke, Collins, and Jansen, no example of the above presentation is mentioned, and only three cases in 75,903 deliveries in Mesdames Lachapelle and Boivin's memoranda, as I desire, with your permission, to place on record in THE LANCET the first compound presentation that has occurred in my experience (about 1500 labours).

I was summoned on March 21st to a Mrs. H——, multipara, in labour with her sixth child. Liquor amnii said to have been gushing away, at intervals pretty copiously; great pain across the hips; outcry loud; no bearing down effort. On examination per vaginam the nature of the presentation could not be satisfactorily made out, but was recognised as abnormal. After waiting an hour or two, the pains all left, and the patient feeling disposed to sleep, I went home, leaving instructions with the attendant to summon me directly the pains returned, which did not transpire until March 23rd, when on my arrival I found foot, funis, and hand extra vaginam. As the parts were all fully dilated, I immediately restored the hand and arm as nearly as I could to its original position, and drew down the leg forcibly, terminating the labour as a footling presentation.

The child was born semi-asphyxiated, and to all appearance dead, but by abstaining from cutting the cord, which was pulsating strongly, and adopting the usual restorative measures, it recovered, and, with the mother, is doing well. The mother had a slight hysteric convulsion.

I am, Sir, yours faithfully,

March 27th, 1882. WALTER SUMPTER, M.D.

MODIFICATION OF THE GERM THEORY OF DISEASE.

To the Editor of THE LANCET.

SIR,—The suggestions put forward by Mr. Millican in THE LANCET of March 18th, respecting the bearing of evolution and specificity on the germ theory, had been pointed out by me in your columns of May 14th, 1881. There can be no doubt that the germ theory, as at present understood, is unable to explain such facts as the origination *de novo* of fevers, the hybridity and transmutation of diseases, and the occurrence of anomalous species. The theory needs to be expanded in accordance with the doctrine of evolution, if it is to keep pace with the facts it was invented to explain.—I am, Sir, yours, &c.,

W. J. COLLINS, M.B., B.S., B.Sc.
Albert-terrace, Gloucester-gate, N.W.,
March 24th, 1882.

I. V. R. C.—We believe that the scheme recommended by our correspondent, or a somewhat similar one, was carefully considered when the reorganisation of the department was under discussion, and it was rejected on the ground that its adoption would be attended with great practical difficulties and no commensurate advantage. We do not think that any good would be done by reopening the subject, and we cannot spare room for what would be, in our opinion, a fruitless discussion.

An Occasional Reader has not enclosed his card.

Mr. Porter.—The secretary, Mr. Mark Judge, might be able to give the information.

SENIORS AND JUNIORS.

To the Editor of THE LANCET.

SIR,—Reflecting on the various experiences I have had in about sixteen years of assistants and principals, having in my own case passed through all the phases of assistant, junior partner, and principal, and also, by a curious chain of circumstances, been placed in the position of adviser, an idea, which has often presented itself to my mind before, again comes before me. It is this: whether it might not be possible by a kind of register or similar mode for juniors in the profession to ascertain the peculiar qualities and attributes of those seniors who fill the rôle of principals or senior partners. A young fellow who becomes assistant puts himself and his character, and consequently his career, at the mercy of the man he goes to assist. If the latter is a gentleman, all is well; but if otherwise, no matter how good the services may be, how thoroughly upright and efficient the assistant may prove himself, he may, when subsequently he comes to give a reference, find that somehow a cloud has rested on his fame. No reason is given, but the process of damning with faint praise has been gone through, and sufficient doubt has been generated to cause the loss of an appointment. "Your references are very good, certainly, but I think, &c., &c.," and the young fellow is done for. Disheartened, doubtful of himself, cannot tell what is the matter, and, unless one in a hundred, is probably ruined; or he may, under the most specious promises (and too frequently through an agent), become entangled with one of those men who are known "never to keep an assistant long," and yet who, when applied to for reference, contrive to foist all the onus of short stay on to the junior's shoulders, who, unless he can get possession of the written proof, has no redress against what in many cases is slander and libel. Or he may be the victim of one of those unprincipled men who engage "an assistant with a view to partnership," and after taking all out of him for a time, while the emolument is small, find some trumpery excuse for severing the engagement, most generally because the junior, trusting to what he assumes to be a gentleman's honour, fails to get his position secured in black and white; with the result that when as much use has been made of him as possible, or it is time to increase his salary or share, he finds himself set afloat again, with loss of valuable time and money, and probably having parted with some degree of bad blood, and thereby deprived of a reference. I am, Sir, yours, &c.,

March 25th, 1882. XERXES.

HYPERIDROSIS OF PALMS.

To the Editor of THE LANCET.

SIR,—Perhaps some of your correspondents can kindly advise me in the following case.

A gentleman, aged thirty-two, nervous temperament; muscular development and general health good. Has always suffered from hyperidrosis of palms, but latterly the affection is aggravated. Hot drinks, especially tea, or over indulgence in wine, increase the affection, but abstinence does not cure it. Anxiety of any sort or the consciousness that he has to shake hands with anyone much increases the flow of sweat, so that if left unwiped it drops off his hands. Fingers and hands are tremulous. The skin on the back of the hands is loose, coarse, and red. Is not a smoker, but occasionally over-indulges in wine, and habitually takes a generous quantity. History of intemperance in mother; family history otherwise good. The patient is made miserable, and shrinks from society on account of his malady.

Can anything be done either mechanically or by operation? The sweat glands on palm are larger and probably more numerous than usual. Would the removal of a strip of skin along the margin of the hand (either inner or outer) be likely to affect good by causing contraction, and so compressing the glands? This suggestion is of course made only as a last resource. The patient is willing to submit almost to anything for a cure. I am, Sir, yours, &c.,

March 28th, 1882. ANXIETY.

ERRATUM.—In the letter signed "A Faithful Hahnemannian," page 509, line 4, of paragraph 5, for "attenuation," read *alternation*.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Professor Norris, Birmingham; Sir Joseph Fayrer, London; Sir John P. Hennessy, Hong Kong; Professor Latham, Cambridge; Dr. Pollock, London; Mr. J. E. Williams; Mr. G. Fleming; Dr. Springmühl; Dr. Rafael Funon, Seville; Dr. Sigm. Exner, Vienna; Dr. Tripe, London; Mr. S. A. Lucas, Liverpool; Mr. Simeon Snell, Sheffield; Mr. Vennan, London; Mr. Jack, London; Dr. Archifald, St. Andrews; Dr. Alford, London; Dr. Sumpter; Dr. Percy Boulton, London; Dr. Strahan, Berry Wood; Dr. Eadie, London; Dr. de G. Griffith; Dr. A. C. Pope, London; Dr. Grabham, Pontefract; Dr. Channing Neill, Ryde; Dr. Jamieson, Melbourne; Mr. Fellows, London; Dr. Bedford Fenwick, London; Dr. Merry, Hemel Hempstead; Dr. Cameron, Epworth; Dr. Davy, Southernhay; Mr. E. Downes, Kashmir; Mr. Mitchell, Catford; Dr. Parker, Ventnor; Dr. Hills, Norwich; Dr. Lisnington Ash; Dr. Southey, London; Mr. Bellamy, London; Mr. Mercier, London; Surgeon-General Fraser, Sandhurst; Dr. T. S. Cobbold, London; Mr. Judge, London; Mr. Knowsley Thornton, London; Dr. Hughes, London; Mr. J. Milne, Bedminster; Mr. W. S. Frew; Dr. Neale, London; Mr. Jelley, John's; Mr. Corke, Prescott; Mr. Furnivall, London; Mr. Hornefold; Mr. Field, London; Mr. Watkins, Worcester; Mr. Grove, Dorchester; Dr. Kennedy, Texas, U.S.A.; Dr. P. Hood, London; Dr. Clay, Durango, U.S.A.; Mr. Barraud, London; Mr. Price, Wolverhampton; Mr. Gill, Kendal; Messrs. Oliver and Boyd, Edinburgh; Mr. Eberle, Easingwold; Messrs. Taylor and Co., Derby; Dr. Ward, Oxford; Mr. Wheeler, Manchester; Mr. R. Freeman, London; Mr. Watson, Scarborough; Dr. Gill, Canterbury; Mr. Hewett, Leicester; Dr. Robert Barnes, London; Dr. Darwin; Dr. Delvaille, Bayonne; Dr. B. W. James, Philadelphia; Mr. Monteith Haward; Dr. D. J. Hamilton; Edinburgh; A. M.; Tubal; M.D., M.Ch., Plymouth; Dispenser; S. C. P.; Midwife; X. Y. X.; C. M., Sheffield; &c., &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Lloyd, Sittingbourne; Mr. Spanton, Hanley; Mr. Montgomerry, Storrington; Mr. Butler, Winchester; Mr. Brook, Huddersfield; Mr. Harrison, Liverpool; Mr. Lyle, Shacklewell; Mr. Pase, Newcastle-on-Tyne; Mr. Brits, Aberdeen; Dr. Donovan, Gosport; Messrs. Harvey and Reynolds, Leeds; Mr. Norman, Cheltenham; Dr. Dickson, Buxton; Mr. Farrer, Slough; Mr. Stewart, Grimley-on-the-Hill; Mr. Salmon, London; Mr. Hodgkinson, London; Messrs. Keith and Co., Edinburgh; Dr. Bastable, Blackburn; Mr. Thompson, London; Dr. Watson, Manchester; Mr. Sutton, Smethwick; Mr. Deane, Stoke Newington; Mr. Williams, Talforth; Mr. Mudd, Chichester; Mr. Roth, Brighton; Mr. Adams, London; Dr. Hood, London; Dr. Pierce, Liverpool; Madame Xemos; Mr. Coleman, Cardiff; Mr. Carter, Chappel Allerton; Miss Hunter, Whalley Range; Mr. Haines, Totnes; Mr. Wilson, Derby; Surgeon, Neston; Spectemar Agendo; Medicus, Rawtenstall; D. M., Stockwell; Assistant, Blackburn; Unit; M.D., Bournemouth; Q.; Medicus, Chester; Cairo, Edinburgh; Hants; Medicus, Regent's-park; J. W., Blackburn; Medicus, Leicester; Omega, Brighton; H. F.; Midlands; Medicus, Bradford; Medicus, Seaham Harbour; J. M.; K., South Kensington; X. Y. Z., Leeds; Medicus, Cookstown; R. J. P.; M. D. Agathos; &c., &c.

Indian Mirror, Eddowes's Shrewsbury Journal, Liverpool Daily Post, Beverley Guardian, City News, Liverpool Mercury, Animal World Hampshire Independent, Cafes Publichouse News, Brighton Guardian, Daily Courier, Argosy, &c., have been received.

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